BCS 260 PM1 Capstone Project for Spring 2021

Distributed in Class 3-16-2021

The All Things Movies Company (ATMCO) has hired you to begin the design of a scalable movie database. ATMCO would like to be the next-generation of movie information database sources and you are to launch this effort!

Your movie database should include relevant entities/attributes about movies and movie-related entities, including at least the following:

- Movie Title
- Year the Movie Was Made
- The Movie Director
- The Movie Company associated with the film (MGM, Paramount, etc.)
- Movie Characters
- Movie Actor Playing the Characters
- Movie Actor Role (e.g., Leading Actor(s), Supporting)
- Movie genre (action, comedy, dramedy etc.)
- Memorable movie quotes, if any

Some things to remember:

- A movie can be a remake of an older movie. If this is the case, you need to account for it.
- A movie has a director. The director may also be an actor (e.g., Clint Eastwood).
- A movie may have more than one director associated with it.
- For movie actor role, if an actor is not well-known (e.g., other than Tom Cruise or Renee Zellweger in *Jerry McGuire*) you can treat them as supporting actors for purposes of this project.
- A movie can fall into more than one genre.
- A movie can have one but usually has multiple actors.
- A movie may have a number of memorable quotes.
- A movie may have more than one company associated with it.

Your entities should include relevant attributes. There will be additional questions and considerations you may want to ask about as you consider the project. I have attached a sample spreadsheet that shows some movies, actors, and quotes; however, use any movies of your choice.

Although the capstone is limited in scope, it should be scalable; if you expand coverage (e.g., include screenwriters, producers, etc.) you should be able to do so without unduly disrupting your database.

Complete the requirements for this project in the stages indicated below. **This project is an individual project only; no group projects allowed.**

There are several deliverables for this capstone project, each of which counts as a separate component of the capstone grade. Each deliverable must be submitted in order to get the maximum grade. For example, if you skip the ERD but complete the other three deliverables, your grade will not include the Deliverable 1 points. *Include your name on all deliverables – e.g., using the comments in SQL or as a text box on Visio or draw.io – or including your name in the file names.*

The deliverables are as follows:

DELIVERABLE I:

Create the ERD [VISIO or Draw.IO] with entities and relationships (e.g., 1:1, 1:M). Show strong/weak (solid vs. dotted line) and whether optional or mandatory. The diagram must include ALL of the attributes you plan to include in Deliverable II.

Note: The scenario above is a general description. It will be up to you to supply any needed assumptions about the data you will work with. State these assumptions either on a Word document to accompany Deliverable I's ERD file (as a Visio or Draw.IO PDF) or directly as comments on the ERD file. Deliverable I is worth 35% of your capstone grade.

DUE DATE: Deliverable I is due via **COURSE MESSAGES ONLY** (email NOT accepted!) no later than EOD [end of the day] on April 16, 2021. Submit Deliverable I as a Visio file or a PDF derived from Draw.IO and with a Word file if needed. Note that if you submit more than one file over Course Messages you must compress the files into a single file.

DELIVERABLE II:

Use the ERD you prepared for Deliverable I to create a database structure for the database. Write an SQL script that would CREATE the database tables. Be sure the tables are scripted in the correct order and have the appropriate constraints and data types. Submit Deliverable II as an SQL script in a text file (*.txt or *.sql). Use SQL comments within to supply any explanations for coding you feel is necessary. Deliverable II is worth 25% of your capstone grade.

DUE DATE: Deliverable II is due via **COURSE MESSAGES ONLY** (email NOT accepted!) no later than EOD [end of the day] on April 30, 2021.

DELIVERABLE III

Populate the database you created in Deliverable II with data. Write the SQL insert script to enter at least 10 rows of data for each table. Again, be sure the inserts go in the correct order. Submit Deliverable III as an SQL script in a text file (*.txt or *.sql). Deliverable III is worth 25% of your capstone grade.

DUE DATE: Deliverable III is due via **COURSE MESSAGES ONLY** (email NOT accepted!) no later than EOD [end of the day] on May 6, 2021.

DELIVERABLE IV:

Write at least 20 SQL select/join queries to retrieve information from the database. You may use a general SQL query to retrieve all the rows from a given table. But at least 12 queries must use either a WHERE clause, GROUP BY, GIVING, etc., and involve data from multiple tables. Submit the queries in a text file (*.txt or *.sql). Deliverable IV is worth 15% of your capstone grade.

DUE DATE: Deliverable IV is due via **COURSE MESSAGES ONLY** (email NOT accepted!) **no later than EOD of the day before our final exam, which will be on May 13, 2021**.