COMP3311 Database Management Systems

Assignment 1 (8% of The Final Grade)

Due Date: Friday 4 March 2022 @ 11.59 PM

Assignment 1 consists of the conceptual design of a database, which produces an Entity-Relationship diagram. The necessary information for schema design is given in the Universe of Discourse (UoD) described below.

# Assignment Brief

The following describes the Universe of Discourse for the assignment:

With the current popularity of video streaming services like ‘Disney Plus’, ‘Hulu’ and ‘Netflix’, your task is to design a database for a new streaming service called ‘HK Cinema’.

Each video on the site is classified as either a movie or TV show. For each video, the database stores it’s title, a unique ID, rating (a number between 0 – 5), classification (level I, IIA, IIB and III), a brief text description and a collection of tags related 5 to it (Action, Adventure, Romance, etc.). Additionally, the audio language options and subtitle language options are recorded.

For movies, the runtime and date of release is stored. If the movie has a sequel then that information is also visible in the system. In the case of a TV show, each episode of the show can be identified via a season number and episode number in conjunction with the code of the show. Each episode also records the runtime and date of release.

Cast members of products are also recorded on the site, which stores their unique ID, name and nationality. One actor has only one name and one nationality. If a cast member acts in a product then the name of their role is recorded. It is possible for a cast member to have multiple roles on the same product.

Accounts on ‘HK Cinema’ are required in order to use the service. When a user registers for an account, the system stores their name, username, email, birthdate and registration date, along with their subscription tier (either ‘Free’ or ‘Premium’). The username identifies the account. When an account (of either tier) watches a movie or TV show episode the information is stored in the system. If they stop watching partway through a movie or episode, the timestamp of where they stopped at is stored.

‘Premium’ accounts have some additional functionality ‘Standard’ accounts do not have access to. Such accounts may become friends with other ‘Premium’ accounts. They may also create multiple playlists containing any product on ‘HK Cinema’. The name of each playlist must be unique within that account.

Based on the above UoD, you are required to create an ER diagram using the notation taught in lectures or used in tutorials/labs to represent the conceptual schema described by the Universe of Discourse. Depending on your design choices, you may need to use the extended ER diagram.

State clearly any assumptions you make regarding your design approach on your ER Diagram. Please note that you cannot make assumptions to simplify or compromise the completeness of the Universe of Discourse. If there are any points that need clarification, in the specification of the Universe of Discourse as given above, you must first attempt to clarify them with your tutor and/or lecturer.

# Assessment

Each part of the assignment is allocated 100 points which will be converted into 8 course marks.

# Submission

Please submit your E-R diagram via Canvas (Assignment – Assignment 1) as a .pdf file.

**(You could use the Oracle SQL Developer to create your E-R diagram, but it is not a must. You may use any approach you want as long as the E-R diagram is drawn clearly.)**

# Collaboration and Plagiarism

This is an individual assignment. The assignment solution you submit must be solely your own work; copying or letting others to copy are both considered cheating.

If you have any questions regarding acceptable level of collaboration with your peers, please see either the lecturer or your tutor for guidance. Remember that ignorance is not a defence!

The University has strict policies with regard to collusion and plagiarism. Penalties for engaging in unacceptable behaviour will apply. You are required to read and understand the policies on academic integrity and plagiarism. Note: Any posts on in online venues containing assignment specific solutions/hints will be reported to the department.

# Late Submissions

Late submissions will incur a penalty of 25%, 50% and 100% reduction a delay of 6, 12 and 18 hours respectively. If you believe a delay is caused by reasons outside your control, you should contact our TA, Ms Yehong XU, in advance via email.