Lab 2

In this Lab you will implement the Movie Streaming Service (MSS) available on Canvas. Make sure to read that document first.

The features you implement will also be used for the final lab, with a graphical user interface. Make sure to backup all your files!

Lab Presentation

For the lab presentation, make sure you have the following ready to be shown to the TA:

- A thorough description of your database design, using course related terminology during the lab presentation.
- The queries specified in this document, ready to be executed.
  - Refrain from creating functions since this is a course designed to teach query programing languages.
- Database diagram with all the tables and relations which are in BCNF-form.
- Code for the database creation showing keys, domains etc.

Project Background

You have been asked to implement the Movie Streaming Service, a service for streaming films that KTH wants to launch for all students.
The specification of attributes and relations can be extracted from reading the specification document available on Canvas.
You are provided with some movie and customer data on Canvas to help you get started, but you have to come up with some data to add to your other relations.

OBS! The data from your previous lab will not be used for this lab. Consider erasing these relations if you have passed the previous lab, or switching to use your partner's database.

Database implementation

You are required to do the following tasks in order to pass this Lab. *Keep in mind that the first and second task is part of Homework 2.*

Create the MSS database with the following criteria:

1. Decompose the database to BCNF.
2. Create an ER-Diagram
3. Insert all your relations into your database.
4. Determine and implement all necessary key constraints.

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5. Insert data for movies and customers provided on Canvas.
6. Insert varied data of your choice to your other relations, fulfilling the following requirements.
    6.1. At least 5 movie series. Each series should consist of at least 3 parts (You can make these up from existing media).
    6.2. At least 5 different movie remakes (of a different old movie each). The original movie must also be present in the database.
    6.3. At least 10 of the customers have at least 2 profiles.
    6.4. At least 3 admins.
    6.5. At least 10 subscriptions that have expired.
    6.6. At least 5 subscriptions that have yet to expire.

It’s a good idea to do the data manipulating actions lastly, when you are certain your relations won’t need changing, because updating lots of data can be very tedious work. Read your tasks thoroughly to make sure you can execute your queries with the available relations.

Queries

The following queries should be ready to be executed on your database and show a satisfactory result. Lists and tables are expected to be alphabetical or numerical in order.

1. Present a table showing the five most popular media along with the total number of times each media has been streamed.
2. Present a table showing how likely it is that each user will finish a media, based on their past viewings.
3. Present a list of the top 3 most popular directors, which are ranked according to the total amount of minutes their media accumulate throughout all the users.
4. Present a list of all the remakes in the system. For each pair, show which version (original or remake) is the most popular.
5. For each media series, use the recursive method to present the name of each media in the series in order along with the sum of the movies popularity (see question one).
   Example:
   The Hunger Games, Catching Fire, Mockingjay Part 1, Mockingjay Part 2 | 7