DBI Lab 004 - INSERT , SELECT and more SQL Commands

COMP1048 - Databases and Interfaces

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Lab Overview

Today we will continue to practice writing SQL Queries. You have been provided (via Moodle) with a database. The database contains the tables neccesary to complete the exercises provided below.

Exercise 1

Write the SQL necessary to insert the data presented in the table below into your DB tables. It is **not** neccesary to create new tables - they have already been defined and created for you!

Film Name	Price	Year	Genre	Lead Actor
Die Hard with a Vengeance	12.24	1999	Action	Barry Nelson
Black Snake Moan	9.99	2007	Adventure	Barry Nelson
Snakes on a Plane	9.99	2011	Comedy	Arethan Franklin
Freeway of Love	9.99	2018	Drama	Bullet Prakash
I knew you were waiting for me	12.25	1997	Comedy	Daniel Craig
The Black Panther	10.99	2018	Action	James Bond
The Jungle Book	9.99	2015	Adventure	Jonny Walker
Infinity War	8.5	1975	Horror	Laura Dern
Coming to Europe	12.99	2001	Adventure	Laura Dern
The Midnight	10.99	2019	Drama	Mr. Ryan Reynolds

> **Hint**
>
> You'll notice that we've not provided any information about the design of the existing database tables. You should use the commands available to you (via SQLite) to 'discover' the schema (hint - `.schema`) of the existing tables (hint - `.tables`).

Exercise 2

Write the SQL neccesary to fulfil the following requests:

1. List all film names and their year of release. Results should be ordered by Year in Descending order.
2. List all films that cost more than 10.
3. List all Lead Actors. Duplicates should be removed.
4. What is the total value (sum) of all Adventure films?
5. What is the average price of Comedy films? The average price should be presented with a column heading named 'AVG Price of Comedy Films'.

   > **Hint**
   >
   > SQLite does not display column headers by default. To enable the display of column headers use:
   >
   > `.headers ON`

6. How many films has 'Barry Nelson' been the Lead Actor? Your result should be a number, not a list of the relevant film's details. Your solution should not include a hardcoded `actID` value in it's formation.

   > **Note**
   >
   > Don't do this:
   >
   > `SELECT ... WHERE actID = X`
   >
   > Instead, write the query in a way where X is queried dynamically. Hint - use a subquery.

7. Assume the year is 2021. Calculate the average age, in years, of all films stored in the database. Your answer should be the average age of all films, not the average of the film's realease year.

Submission

Please submit a PDF document containing your solutions to the above tasks. For both exercises you should submit the *code* you developed to answer these exercises (not the result).

Submitting this assignment will contribute 2% to your overall Module grade. Your submission should demonstrate reasonable effort and fulfil the specified requirements set out in this lab sheet in order to receive the full marks.

There is no granularity to the marking, the marking is on a pass-or-fail basis.

This assignment will also serve as a part of your attendance registration for this week. Registration is reported to Faculty office on a weekly basis. The submission point is available on Moodle.

Submission Deadline - Friday, 5 November 2021 @ 17:00