Faculty of Computing

Year 2 Semester 1 (2025)

IT2140- Database Design and Development Lab Sheet 05

Lab Sheet 05: SQL Queries on a Movie Database

Objective

At the end of this lab session, students should be able to join tables and retrieve meaningful information from multiple tables. The lab will focus on practicing SQL queries to extract, filter, and aggregate data from a movie database, including information about movies, stars, theaters, shows, and bookings

Consider the following relations in a movie database.

Movie (title:char(25), year:int, length:float, language:char(15), type:char(1), directorName: char(30))

MovieStar (name: char (15), country:varchar(40), gender:char(1), birthdate: date)

StarsIn (movieTitle:char(25), movieYear:int, starname:char(15), role:varchar(15))

Theater (theaterName: char (20), country: varchar (40), city: varchar (20), capacity: int)

Show (showId: int, movieTitle: char (25), theaterName: char (20), Date: datetime, ticketPrice: real, spectators: int)

Booking (showId: int, custName: Char (50), numTickets: int)

Exercises 1

Write SQL queries for the following — **see MovieData_Set.sql for reference**

(a) Find the names of the directors who had worked with American stars.

(b) Find the movies in English for which all seats are booked in a theater.

(c) Display the names of stars who have acted in 3 or more movies in any year between 2017 and 2018.

(d) Find the names of feature movies which is viewed by at least 1 million spectators in total.

(e) Find the total income of each movie shown in theaters in America.

Exercises 2

Write SQL queries for the following— **see MovieData_Set.sql for reference**

(a) Find the names of stars who have acted in movies directed by "Jon Watts".

(b) List the movies shown in theaters in "LA" along with the total number of spectators.

(c) Display the names of customers who have booked tickets for more than one different movie.

(d) Find the theaters in which the total income from all shows exceeds 50,000.

(e) Find the customers who have booked tickets for movies in more than one theater.

Submission Requirement:

Complete **Exercises 2** of this lab sheet and upload your SQL query answers to the **Git repository** provided by your instructor **before end of the day.**

File Naming Guidelines:

- Name your submission file as:
  Lab_5_Exercises_2.sql

Additional Instructions:

- Ensure your SQL queries are well-formatted and include comments where necessary.
- Test your queries before uploading to confirm they run without errors.
- Commit and push your file to the correct Git repository and branch as instructed.