SLIIT UNI
THE KNOWLEDGE UNIVERSITY

Faculty of Computing

Year 2 Semester 1 (2025)

IT2140- Database Design and Development Lab Sheet 06

Lab Sheet 06: SQL Views and Functions

Objective

At the end of this lab session, students should be able to create SQL views to simplify data retrieval and SQL functions to perform calculations on movie database tables.

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

Answer the following — **see MovieData_Set.sql for reference**

(a) Create a view to display the title of the movie being shown, theater name, country and city for shows which the theater is fully booked.

(b) Create a view to display the name, country, and number of movies each actor has starred in.

(c) Create a function which returns the total earning given a movie title.

(d) Create a function which returns the number of remaining seats in a given show.

Exercises 2

Answer the following— **see MovieData_Set.sql for reference**

(a) Create a view to display the list of movie titles, movie year, director name along with the number of theaters they have been shown in.

(b) Create a view that lists each theater, its city, and the total number of movies shown there.

(c) Create a function that returns the number of movies they have acted in given a star name.

(d) Create a function that returns the total number of spectators given the theater name.

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_6_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.