ASSIGNMENT 2

Assignment Objectives

- Manipulating Data
- Categorizing Data
- Sorting and Grouping Data
- Summarizing Data
- Combining Data
- NestedQueries
- Views and Indexes
- Transforming Data

Data

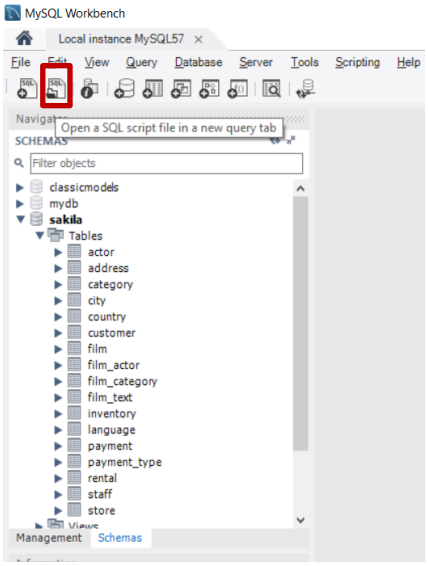
- Create database using sql scripts located under **Files>Data >Sakila** folder in the course material
- Further documentation : https://dev.mysql.com/doc/sakila/en/

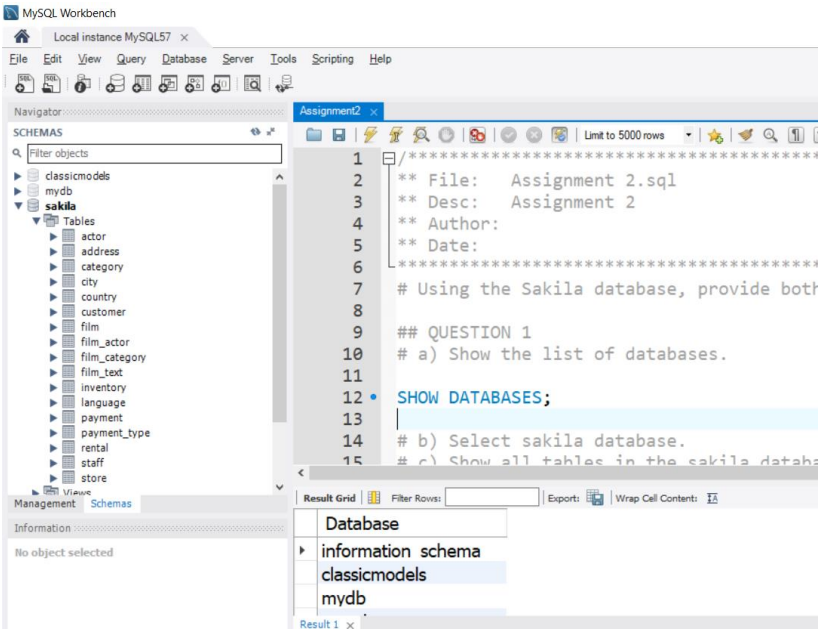
Submissions

- Solutions should be submitted as a single completed SQL file
- For each question, you are required to provide a SQL query and assumptions made if any
- Note : Bonus points given for answering optional questions and proper formatting, comments etc.

Submission

- Copy the section below into a new file with .sql extension called **Assignment2.sql**
- Open this file using MySQL workbench and provide answers below each question.
- Please keep the questions as they are as SQL comments as this is useful for grading
- There is no need to submit screenshots for this assignment.





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** File:   Assignment2.sql

** Desc:   Assignment 2

** Author:

** Date:

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Using the Sakila database, provide the SQL queries you used. If there is more than one solution, provide only one solution.

###################################### QUESTION 1 ##################################

a) Show the list of databases.

b) Select sakila database.

c) Show all tables in the sakila database.

d) Show each of the columns along with their data types for the actor table.

e) Show the total number of records in the actor table.

f) What is the first name and last name of all the actors in the actor table ?

g) Insert your first name and middle initial (in the last name column) into the actors table.

h) Update your middle initial with your last name in the actors table.

i) Delete the record from the actor table where the first name matches your first name.

j) Create a table payment_type with the following specifications and appropriate data types

Table Name : “Payment_type”
Primary Key: "payment_type_id”
Column: “Type”
Insert following rows in to the table: 1, “Credit Card” ; 2, “Cash”; 3, “Paypal” ; 4 , “Cheque”

k) Rename table payment_type to payment_types.

l) Drop the table payment_types.

################################### QUESTION 2 ##################################

a) List all the movies (title & description) that are rated PG-13.

b) List all movies that are either PG OR PG-13 using IN operator.

c) Report all payments greater than and equal to 2$ and Less than equal to 7$.

Note : write 2 separate queries conditional operator and BETWEEN keyword

d) List all addresses that have phone number that contain digits 589, start with 140 or end with 589

Note : write 3 different queries

e) List all staff members (first name, last name, email) who have no password.

f) Select all films that have title names like ZOO and rental duration greater than or equal to 4

g) What is the cost of renting the movie ACADEMY DINOSAUR for 2 weeks ?

Note : use of column alias

#h) List all unique districts where the customers, staff, and stores are located

Note : check for NOT NULL values

i) List the top 10 newest customers across all stores

################################## QUESTION 3 ################################

a) Show total number of movies

b) What is the minimum payment received and max payment received across all transactions ?

c) Number of customers that rented movies between Feb-2005 and May-2005 (based on payment date).

d) List all movies where replacement_cost is greater than 15$ or rental_duration is between 6 and 10 days

e) What is the total amount spent by customers for movies in the year 2005 ?

f) What is the average replacement cost across all movies ?

g) What is the standard deviation of rental rate across all movies ?

h) What is the midrange of the rental duration for all movies

########################## QUESTION 4 ##########################

a) List all customers that live in the Nepal

b) List all actors that appear in the movie titled Academy Dinosaur.

c) What is the revenue generated by each customer ?

d) List top 10 customers that rented the most movies.

e) List the inventory available in store to rent for each of the movies

f) List the top zipcodes that have the highest rental activity

########################## QUESTION 5 ##########################

Note: For questions a, b, c below use a single query with a sub query

a) List actors and customers whose first name is the same as the first name of the actor with ID 8

b) List customers and payment amounts, with payments greater than average payment amount

c) List customers who have rented movies at least once

Note: use IN clause with the sub query

d) Find the floor of the maximum, minimum and average payment amount

########## QUESTION 6 ##########

a) Create a view called actors_portfolio which contains information about actors

and films (including titles and category).

b) Describe the structure of the view and query the view to get information on the actor ADAM GRANT

c) Insert a new movie titled Data Hero in Sci-Fi Category starring ADAM GRANT

Note: If you see an error, explain why this is not permitted

########## QUESTION 7 (Optional Practice Questions) ##########

a) Customers sorted by first name and last name in ascending order.

b) Group distinct addresses by district.

c) Count of movies that are either G/NC-17/PG-13/PG/R grouped by rating.

d) Number of addresses in each district.

e) Find the movies where rental rate is greater than 1$ and order result set by descending order.

f) Top 2 movies that are rated R with the highest replacement cost.

g) Find the most frequently occurring (mode) rental rate across products.

h) Find the top 2 movies with movie length greater than 50mins and which has commentaries as a special features.

i) List the years with more than 2 movies released.

########## QUESTION 8 (Optional Practice Questions) ##########

a) Extract the street number (characters 1 through 4) from customer addressLine1

b) Find out actors whose last name starts with character A, B or C.

c) Find film titles that contains exactly 10 characters

d) Format a payment_date using the following format e.g "22/1/2016"

e) Find the number of days between two date values rental_date & return_date