

SQL Assignment: Sakila Database

How to Approach This Assignment

This assignment will test your ability to write SQL queries to retrieve and manipulate data. For each exercise, you will need to carefully consider which tables contain the necessary information and how to link them. Pay attention to the hints provided for each question, as they will guide you on the SQL concepts required to solve the problem. You are encouraged to explore the Sakila database schema to understand the relationships between the tables.

Exercises

Exercise 1: Write a query to retrieve the title and language of all films.

Hint: This query requires a JOIN.

Exercise 2: Write a query to find the total number of actors in the database.

Hint: This query requires an aggregate function.

Exercise 3: Write a query to list the full name of all customers who live in the city of 'London'.

Hint: This query requires a JOIN.

Exercise 4: Write a query to find the number of films in each category. Display the category name and the number of films.

Hint: This query requires a JOIN and an aggregate function.

Exercise 5: Write a query to find the titles of all films that have a rental rate higher than the average rental rate of all films.

Hint: This query requires a subquery.

Exercise 6: Write a query to calculate the total revenue for each store.

Hint: This query requires a JOIN and an aggregate function.

Exercise 7: Write a query to list the top 5 most rented films. Display the film title and the number of times it has been rented.

Hint: This query requires JOINs and an aggregate function.

Exercise 8: Write a query to find the full name of all actors who have appeared in the film with the title 'AFRICAN EGG'.

Hint: This query requires JOINs.

Exercise 9: Write a query to find the customer who has spent the most money. Display the customer's full name and the total amount they have spent.

Hint: This query requires JOINs and an aggregate function.

Exercise 10: Write a query to list each staff member, the number of rentals they have processed, and the total revenue they have generated.

Hint: This query requires JOINs and aggregate functions.

Exercise 11: Write a query to find all customers who have not made any rentals.

Hint: This query requires a JOIN to find records in one table that do not have a match in another.

Exercise 12: Write a query to list all actors and the number of films they have appeared in. Include actors who have not appeared in any films.

Hint: This requires using a JOIN and an aggregate function to ensure all actors are included, even those without films.

Finding Table Relationships

To successfully complete this assignment, you will need to investigate the table structures and their relationships. Use your knowledge of the Sakila database schema to determine which tables to query and how to join them.