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| Sakila Database Exercise Book |
| module 8 – databases |

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## Module 8 – Databases

## Exercises Introduction

This Exercise Book makes use of the pre-loaded **Sakila** database which comes with your **MySQL** installation.

These exercises should provide a good test for your knowledge of Structured Query Language (SQL). Please work through this book at your own pace: it is more important that you use this book to enhance your SQL abilities than to speed through it as fast as you can without retaining anything.

You may be tested on some of this material at the end of the week, so please bear this in mind when completing each Exercise.

You do not need to store the answers to each Exercise in this book, but you are free to use it as an extension of your notes, if you wish.

Sakila database Exercises

Each Exercise should return at least one record, according to its individual specification. These exercises get progressively more difficult as they progress.

1. Select all Actors from the table.

Select \* FROM actor;

1. Find the actor with the first name “John”.

SELECT \* FROM actor WHERE first\_name=’John’;

1. Find all actors with the surname “Neeson”.

SELECT \* FROM actor WHERE last\_name=’Neeson’;

1. Find all actors with Id numbers divisible by 10.

SELECT \* FROM actor WHERE (actor\_id % 10) = 0;

1. What is the description of the movie with ID of 100?

SELECT description FROM film WHERE film\_id=’100’;

1. Find every movie with a rating of “R”.

SELECT title FROM film WHERE rating=’R’;

1. Find every movie except those with a rating of “R”.

SELECT title FROM film WHERE rating !=’R’

1. Find the 10 shortest movies.

SELECT title, length FROM film ORDER BY length LIMIT 10;

1. Now return only the movie titles.

SELECT title FROM film ORDER BY length LIMIT 10;

1. Find all movies with Deleted Scenes.

SELECT title FROM film WHERE special\_features=’Deleted Scenes’;

1. Which last names are not repeated?

SELECT last\_name FROM actor GROUP BY last\_name HAVING COUNT (\*) = 1;

1. Which last names appear more than once?

SELECT last\_name FROM actor GROUP BY last\_name HAVING COUNT (\*) > 1;

1. Which actor has appeared in the most films?

SELECT MAX(actor\_id) from film\_actor;

SELECT first\_name, last\_name from actor where actor\_id=’200’;

1. Is ‘Academy Dinosaur’ available for rent from Store 1?
2. When is ‘Academy Dinosaur’ due?
3. What is that average running time of all the films in the database?

SELECT AVG(length) FROM film;

1. What is the average running time of films by category?
2. How many movies have Robots in them?

SELECT COUNT(title) FROM film WHERE description LIKE ‘%robot%’;

1. Find the movie(s) with the longest runtime.

SELECT title, length FROM film ORDER BY length desc LIMIT 30;

1. Count how many movies were released in 2010.

SELECT COUNT(title) FROM film WHERE release\_year=’2010’;

1. Find the titles of all horror movies.

SELECT title from film\_list WHERE category=’Horror’;

1. Return the full name of the staff member – in a column named full\_name – with the ID of 1.
2. Retrieve all movies that Fred Costner has appeared in.

SELECT film.title from film

LEFT JOIN film\_actor

ON film.film\_id=film\_actor.film\_id

LEFT JOIN ACTOR

ON film\_actor.actor\_id=actor.actor\_id

WHERE first\_name=’Fred’ AND last\_name=’Costner’;

1. Find out which location has the most copies of BUCKET BROTHERHOOD.
2. How many distinct countries are there?

SELECT DISTINCT COUNT(country) FROM Country;

1. What are the names of all the languages in the database (sorted alphabetically)?

SELECT Name FROM Language ORDER BY name;

1. Return the full names (first and last) of actors with “son” in their last name, ordered by their first name.

SELECT first\_name, last\_name from actor WHERE last\_name LIKE ‘%son%’;

1. Create a list of categories and the number of films for each category.

SELECT DISTINCT (name) from Category

1. Create a list of actors and the number of movies by each actor.
2. Which actor/actress has appeared in the most movies?