

DB Assignment 4 - SQL Section

Problem 1: Average length of films in each category

Description: This query calculates the average film length for each movie category and lists the results in alphabetical order. It uses film and category data to group movies by genre, then determines the typical length for each.

category_name	average_length
Action	111.6094
Animation	111.0152
Children	109.8000
Classics	111.6667
Comedy	115.8276
Documentary	108.7500
Drama	120.8387
Family	114.7826
Foreign	121.6986
Games	127.8361
Horror	112.4821
Music	113.6471
New	111.1270
Sci-Fi	108.1967
Sports	128.2027
Travel	113.3158

Analysis: The results show how movie duration differs by genre. For example, games and sports films average longer runtimes, while documentary or children's categories have shorter ones.

Problem 2: Categories with the longest and shortest average film lengths

Description: This problem identifies which categories have the highest and lowest average film lengths. It uses the same average calculation but sorts by film length to find the extremes.

category_name	average_length	category_name	average_length
Sports	128.2027	Sci-Fi	108.1967

Analysis: From this, we can see which genres generally feature longer movies and which tend to be shorter. Between sports and sci-fi the longer average runtime is the sports category.

Problem 3: Customers who rented Action movies but not Comedy or Classics

Description: This query lists all customers who have rented at least one Action movie while excluding those who rented any Comedy or Classics. It filters based on specific rental histories.

first_name	last_name
DON	BONE
EDWIN	BURK
AMBER	DIXON
MELINDA	FERNANDEZ
MICHEAL	FORMAN
JO	FOWLER
JUAN	FRALEY
JOANN	GARDNER
LAWRENCE	LAWTON
MATTHEW	MAHAN
TOM	MILNER
CONSTAN...	REID
SCOTT	SHELLEY
DONNA	THOMPSON
DOLORES	WAGNER
RUBY	WASHINGT...
GINA	WILLIAMSON

Analysis: The result identifies customers with a strong preference for Action films only. Such data can be valuable for targeted marketing or personalized movie recommendations.

Problem 4: Actor who appeared in the most English-language movies

Description: This question determines which actor has appeared in the largest number of English-language films by counting how many times each actor appears in movies where the language is English.

first_name	last_name	number_of_movi...
GINA	DEGENERES	42

Analysis: The outcome reveals the actor (Gina DeGeneres) most active in English-language cinema. This could be used to recognize leading contributors or popular actors in the English-speaking film market.

Problem 5: Distinct movies rented for exactly 10 days from the store where Mike works

Description: This query counts how many different movies were rented for exactly ten days from the store associated with the staff member named Mike. It compares rental and return dates to determine duration.

number_of_movies
61

Analysis: The results show how many unique titles were rented for that exact period, which can help analyze customer rental habits or store-level performance patterns.

Problem 6: Actors who appeared in the movie with the largest cast

Description: This question finds the movie that has the largest number of actors in its cast and lists all those actors alphabetically. It identifies the film with the highest collaboration level among performers.

first_name	last_name
JULIA	BARRYMORE
VAL	BOLGER
SCARLETT	DAMON
LUCILLE	DEE
WOODY	HOFFMAN
MENA	HOPPER
REESE	KILMER
CHRISTIAN	NEESON
JAYNE	NOLTE
BURT	POSEY
MENA	TEMPLE
WALTER	TORN
FAY	WINSLET
CAMERON	ZELLWEGER
JULIA	ZELLWEGER

Analysis: The output shows the actors involved in the movie with the biggest ensemble cast, giving insight into large productions or films featuring many performers.

