

Data Analytics Internship Day 4

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Introduction

This assignment demonstrates the use of SQL to extract, analyze, and summarize data from a relational database. Using the Sakila sample database, various queries were written to explore customers, actors, films, and categories, showcasing skills in joins, aggregation, subqueries, and views for data analysis.

1. List first 10 actors

```
1  -- List first 10 actors
2  • SELECT actor_id, first_name, last_name FROM actor LIMIT 10;
```

actor_id	first_name	last_name
1	PENELOPE	GUINESS
2	NICK	WAHLBERG
3	ED	CHASE
4	JENNIFER	DAVIS
5	JOHNNY	LOLLOBRIGIDA
6	BETTE	NICHOLSON
7	GRACE	MOSTEL
8	MATTHEW	JOHANSSON
9	JOE	SWANK
10	CHRISTIAN	GABLE
NULL	NULL	NULL

2. List all films with categories

```
-- Find all actors with first name starting with 'J'
5  • SELECT actor_id, first_name, last_name
6  FROM actor
7  WHERE first_name LIKE 'J%';
```

actor_id	first_name	last_name
4	JENNIFER	DAVIS
5	JOHNNY	LOLLOBRIGIDA
9	JOE	SWANK
27	JULIA	MCQUEEN
35	JUDY	DEAN
40	JOHNNY	CAGE
41	JODIE	DEGENERES
47	JULIA	BARRYMORE
57	JUDE	CRUISE
62	JAYNE	NEESON
67	JESSICA	BAILEY
84	JAMES	PITT
99	JIM	MOSTEL
123	JULIANNE	DENCH
131	JANE	JACKMAN
142	JADA	RYDER
150	JAYNE	NOLTE
176	JON	CHASE
180	JEFF	SILVERSTONE
186	JULIA	ZELLWEGER
192	JOHN	SUVARI
195	JAYNE	SILVERSTONE
199	JULIA	FAWCETT
NULL	NULL	NULL

actor 3

3. List count of films per category

```
9
10  -- Count total number of actors
11  • SELECT COUNT(*) AS total_actors FROM actor;
```

tota...
200

4. Average rental rate per category

```
12
13 -- Average rental duration of all films
14 • SELECT AVG(rental_duration) AS avg_rental_duration FROM film;
15
```

100% 1:15

Result Grid Filter Rows: Search Export:

avg_rental_durati...
4.9850

5. Top 10 actors by film count

```
25 • SELECT a.actor_id, a.first_name, a.last_name, COUNT(fa.film_id) AS num_films
26 FROM actor a
27 JOIN film_actor fa ON a.actor_id = fa.actor_id
28 GROUP BY a.actor_id
29 ORDER BY num_films DESC
30 LIMIT 10;
31
```

100% 1:31

Result Grid Filter Rows: Search Export: Fetch rows:

actor_id	first_name	last_name	num_films
107	GINA	DEGENERES	42
102	WALTER	TORN	41
198	MARY	KEITEL	40
181	MATTHEW	CARREY	39
23	SANDRA	KILMER	37
81	SCARLETT	DAMON	36
37	VAL	BOLGER	35
158	VIVIEN	BASINGER	35
106	GROUCHO	DUNST	35
13	UMA	WOOD	35

6. LEFT JOIN All customers and their rentals.

```
1 • SELECT cu.customer_id, cu.first_name, cu.last_name, a.address, ci.city
2 FROM customer cu
3 LEFT JOIN address a ON cu.address_id = a.address_id
4 LEFT JOIN city ci ON a.city_id = ci.city_id
5 LIMIT 20;
6
```

100% 1:6

Result Grid Filter Rows: Search Export: Fetch rows:

customer_id	first_name	last_name	address	city
1	MARY	SMITH	1913 Hanoi Way	Sasebo
2	PATRICIA	JOHNSON	1121 Loja Avenue	San Bernardino
3	LINDA	WILLIAMS	692 Joliet Street	Athenai
4	BARBARA	JONES	1566 Inegl Manor	Myingyan
5	ELIZABETH	BROWN	53 Idlu Parkway	Nantou
6	JENNIFER	DAVIS	1755 Santiago de Compostela Way	Lanado
7	MARIA	MILLER	800 Santiago de Compostela Parkway	Kragujewac
8	SUSAN	WILSON	478 Joliet Way	Hamilton
9	MARGARET	MOORE	613 Korolev Drive	Masqat
10	DOROTHY	TAYLOR	1531 Sai Drive	Esfahan
11	LISA	ANDERS...	1542 Tarlac Parkway	Sagamihara
12	NANCY	THOMAS	808 Bhopal Manor	Yamuna Nagar
13	KAREN	JACKSON	270 Amroha Parkway	Osmaniye
14	BETTY	WHITE	270 Bydgoszcz Avenue	Glinz Heights
15	HELEN	HARRIS	419 Ilgan Lane	Bhopal
16	SANDRA	MARTIN	350 Toulouse Parkway	Southend-on-...
17	DONNA	THOMPS...	270 Toulon Boulevard	Elista
18	CAROL	GARCIA	320 Brest Avenue	Kaduna
19	RUTH	MARTINEZ	1417 Lancaster Avenue	Kimberley
20	SHARON	ROBINSON	1688 Okara Way	Mardan

7. VIEW

Total films per category

```
1
2  -- Create view - total films per category
3  CREATE OR REPLACE VIEW category_film_count AS
4  SELECT ca.category_id, ca.name AS category_name, COUNT(f.film_id) AS total_films
5  FROM category ca
6  JOIN film_category fc ON ca.category_id = fc.category_id
7  JOIN film f ON fc.film_id = f.film_id
8  GROUP BY ca.category_id;
9
10 -- Check the view
11 SELECT *
12 FROM category_film_count
13 ORDER BY total_films DESC
14 LIMIT 10;
```

100% 10:14

Result Grid Filter Rows: Search Export: Fetch rows:

category_id	category_name	total_fil...
15	Sports	74
9	Foreign	73
8	Family	69
6	Documentary	68
2	Animation	66
1	Action	64
13	New	63
7	Drama	62
10	Games	61
14	Sci-Fi	61

8. Top 5 most expensive rentals

```
1  SELECT title, rental_rate
2  FROM film
3  ORDER BY rental_rate DESC
4  LIMIT 5;
```

100% 1:5

Result Grid Filter Rows: Search Expo

	title	rental_rate
	AIRPLANE SIERRA	4.99
	ACE GOLDFINGER	4.99
	ZORRO ARK	4.99
	ALADDIN CALENDAR	4.99
	AIRPORT POLLOCK	4.99

9. First 10 films by category

10. Top 10 categories by number of films

```
1 SELECT f.title AS film_title, c.name AS category_name
2 FROM film f
3 JOIN film_category fc ON f.film_id = fc.film_id
4 JOIN category c ON fc.category_id = c.category_id
5 ORDER BY c.name, f.title
6 LIMIT 10;
7
```

```
15 SELECT ca.name AS category_name, COUNT(f.film_id) AS num_films
16 FROM film f
17 JOIN film_category fc ON f.film_id = fc.film_id
18 JOIN category ca ON fc.category_id = ca.category_id
19 GROUP BY ca.name
20 ORDER BY num_films DESC
21 LIMIT 10;
22
```

100% 1:7

Result Grid Filter Rows: Search Export: Fetch rows:

category_name	num_films
Sports	74
Foreign	73
Family	69
Documentary	68
Animation	66
Action	64
New	63
Drama	62
Sci-Fi	61
Games	61