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DS-09

SQL MCT
Netflix Movies Data Analysis in SQL

1. Write a query to list all titles with their show_id, title, and type.

```
5 •    SELECT show_id, title, type
6      FROM netflix;
7      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

show_id	title	type
s1	Dick Johnson Is Dead	Movie
s2	Blood & Water	TV Show
s3	Ganglands	TV Show
s4	Jailbirds New Orleans	TV Show
s5	Kota Factory	TV Show
s6	Midnight Mass	TV Show
s7	My Little Pony: A New Generation	Movie
s8	Sankofa	Movie
s9	The Great British Baking Show	TV Show
s10	The Starling	Movie
s11	Vendetta: Truth, Lies and The M...	TV Show
s12	Bangkok Breaking	TV Show
s13	Je Suis Karl	Movie
s14	Confessions of an Invisible Girl	Movie
s15	Crime Stories: India Detectives	TV Show
s16	Dear White People	TV Show
s17	Europe's Most Dangerous Man: ...	Movie
s18	Falsa identidad	TV Show

2. Write a query to display all columns for titles that are Movies.

```
7 •     SELECT *
8       FROM netflix
9       WHERE type = 'Movie';
10      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

show_id	type	title	director	cast	country
s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	none	United States
s7	Movie	My Little Pony: A New Generation	Robert Cullen, José Luis Ucha	Vanessa Hudgens, Kimiko Glenn, James Marsde...	none
s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandr...	United States, Ghana, Bu
s10	Movie	The Starling	Theodore Melfi	Melissa McCarthy, Chris O'Dowd, Kevin Kline, Ti...	United States
s13	Movie	Je Suis Karl	Christian Schwochow	Luna Wedler, Jannis Niewöhner, Milan Peschel...	Germany, Czech Republic
s14	Movie	Confessions of an Invisible Girl	Bruno Garotti	Klara Castanho, Lucca Picon, Júlia Gomes, Mar...	none
s17	Movie	Europe's Most Dangerous Man: Otto Skorzeny i...	Pedro de Echave GarcÃa, Pablo AzorÃn Williams	none	none
s19	Movie	Intrusion	Adam Salky	Freida Pinto, Logan Marshall-Green, Robert Joh...	none
s23	Movie	Avvai Shanmughi	K.S. Ravikumar	Kamal Hassan, Meena, Gemini Ganesan, Heera ...	none
s24	Movie	Go! Go! Cory Carson: Chrissy Takes the Wheel	Alex Woo, Stanley Moore	Maisie Benson, Paul Killam, Kerry Gudjohnsen, A...	none
s25	Movie	Jeans	S. Shankar	Prashanth, Aishwarya Rai Bachchan, Sri Lakshm...	India
s27	Movie	Minsara Kanavu	Rajiv Menon	Arvind Swamy, Kajol, Prabhu Deva, Nassar, S.P...	none
s28	Movie	Grown Ups	Dennis Dugan	Adam Sandler, Kevin James, Chris Rock, David ...	United States
s29	Movie	Dark Skies	Scott Stewart	Keri Russell, Josh Hamilton, J.K. Simmons, Dako...	United States
s30	Movie	Paranoia	Robert Luketic	Liam Hemsworth, Gary Oldman, Amber Heard, ...	United States, India, Fra
s31	Movie	Ankahi Kahaniya	Ashwiny Iyer Tiwari, Abhishek Chaubey, Saket ...	Abhishek Banerjee, Rinku Rajguru, Delzad Hiwal...	none
s36	Movie	The Father Who Moves Mountains	Daniel Sandu	Adrian Titieni, Elena Purea, Judith State, Valeriu...	none
s37	Movie	The Stronghold	CÃ©dric Jimenez	Gilles Lellouche, Karim Leklou, FranÃ§ois Civil, A...	none

3. Write a query to list TV shows that were released in the year 2021.

```
10 •    SELECT *
11      FROM netflix
12      WHERE type = 'TV Show'
13        AND release_year = 2021;
14      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

show_id	type	title	director	cast	country	date_added	release_year	rating
s2	TV Show	Blood & Water	none	Ama Qamata, Khosi Ngema, Gail Mabalane, Tha...	South Africa	September 24, 2021	2021	TV-MA
s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	none	September 24, 2021	2021	TV-MA
s4	TV Show	Jailbirds New Orleans	none	none	none	September 24, 2021	2021	TV-MA
s5	TV Show	Kota Factory	none	Mayur More, Jitendra Kumar, Ranjan Raj, Alam ...	India	September 24, 2021	2021	TV-MA
s6	TV Show	Midnight Mass	Mike Flanagan	Kate Siegel, Zach Gilford, Hamish Linklater, Hen...	none	September 24, 2021	2021	TV-MA
s9	TV Show	The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Holl...	United Kingdom	September 24, 2021	2021	TV-14
s11	TV Show	Vendetta: Truth, Lies and The Mafia	none	none	none	September 24, 2021	2021	TV-MA
s12	TV Show	Bangkok Breaking	Kongkiat Komesiri	Sukollawat Kanarot, Sushar Manaying, Pavarit ...	none	September 23, 2021	2021	TV-MA
s15	TV Show	Crime Stories: India Detectives	none	none	none	September 22, 2021	2021	TV-MA
s16	TV Show	Dear White People	none	Logan Browning, Brandon P. Bell, DeRon Horton...	United States	September 22, 2021	2021	TV-MA
s20	TV Show	Jaguar	none	Blanca SuÃ¡rez, IvÃ¡n Marcos, Ã"scar Casas, A...	none	September 22, 2021	2021	TV-MA
s21	TV Show	Monsters Inside: The 24 Faces of B...	Olivier Megaton	none	none	September 22, 2021	2021	TV-14
s26	TV Show	Love on the Spectrum	none	Brooke Satchwell	Australia	September 21, 2021	2021	TV-14
s32	TV Show	Chicago Party Aunt	none	Lauren Ash, Rory O'Malley, RuPaul Charles, Jill ...	none	September 17, 2021	2021	TV-MA
s34	TV Show	Squid Game	none	Lee Jung-jae, Park Hae-soo, Wi Ha-jun, Oh You...	none	September 17, 2021	2021	TV-MA
s40	TV Show	Chhota Bheem	none	Vatsal Dubey, Julie Tejwani, Rupa Bhimani, Jign...	India	September 16, 2021	2021	TV-Y7
s41	TV Show	He-Man and the Masters of the Uni...	none	Yuri Lowenthal, Kimberly Brooks, Antony Del Rio...	United States	September 16, 2021	2021	TV-Y7
s50	TV Show	Castle and Castle	none	Richard Mofe-Damijo, Dakore Akande, Bimbo M...	Nigeria	September 15, 2021	2021	TV-MA

4. Write a query to find all titles where the description contains the word family.

```
14 •    SELECT *
15      FROM netflix
16      WHERE description LIKE '%family%';
17      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

show_id	type	title	director	cast	country	date_added	release_year	rati
s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	none	September 24, 2021	2021	TV-M
s13	Movie	Je Suis Karl	Christian Schwochow	Luna Wedler, Jannis Niewöhner, Milan Peschel...	Germany, Czech Republic	September 23, 2021	2021	TV-N
s29	Movie	Dark Skies	Scott Stewart	Keri Russell, Josh Hamilton, J.K. Simmons, Dako...	United States	September 19, 2021	2013	PG-1
s85	Movie	Omo Ghetto: the Saga	JJC Skillz, Funke Akindele	Funke Akindele, Ayo Makun, Chioma Chukwuka ...	Nigeria	September 10, 2021	2020	TV-N

5. Write a query to count the total number of titles in the dataset.

```
17 •   SELECT COUNT(*) AS total_titles
18      FROM netflix;
19      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔠

total_titles
▶ 99

6. Write a query to find the average duration of all movies (in minutes, wherever the season is mentioned, consider 400 minutes per season).

```
20 • ⊝ SELECT AVG(
21   ⊝   CASE
22   ⊝   WHEN duration LIKE '%Season%' THEN CAST(LEFT(duration, LOCATE(' ', duration) - 1)
23       ⌐ AS UNSIGNED)* 400
24       ⌐ ELSE CAST(LEFT(duration, LOCATE(' ', duration) - 1) AS UNSIGNED)    END) AS average_duration FROM netflix WHERE type = 'Movie';
25       #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔠

AVG(duration)
▶ 100.72727272727273

7. Write a query to list the top 5 latest titles based on the date_added, sorted in descending order.

```
25 •    SELECT *FROM netflix ORDER BY STR_TO_DATE(date_added, '%M %d, %Y') DESC LIMIT 5;
26      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔠 | Fetch rows:

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	list
▶ s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	none	United States	September 25, 2021	2020	PG-13	90 min	Doc
s2	TV Show	Blood & Water	none	Ama Qamata, Khosi Ngema, Gail Mabalane, Tha...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Inte
s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	none	September 24, 2021	2021	TV-MA	1 Season	Crin
s4	TV Show	Jailbirds New Orleans	none	none	none	September 24, 2021	2021	TV-MA	1 Season	Doc
s5	TV Show	Kota Factory	none	Mayur More, Jitendra Kumar, Ranjan Raj, Alam ...	India	September 24, 2021	2021	TV-MA	2 Seasons	Inte

8. Write a query to list all titles along with the number of other titles by the same director. Include columns for show_id, title, director, and number_of_titles_by_director.

```
26 •⊖    SELECT show_id, title, director, (SELECT COUNT(*) FROM netflix t2
27       WHERE t2.director = t1.director) AS number_of_titles_by_director FROM netflix t1;
28
29       #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

show_id	title	director	number_of_titles_by_director
s1	Dick Johnson Is Dead	Kirsten Johnson	1
s2	Blood & Water	none	38
s3	Ganglands	Julien Leclercq	1
s4	Jailbirds New Orleans	none	38
s5	Kota Factory	none	38
s6	Midnight Mass	Mike Flanagan	1
s7	My Little Pony: A New Generation	Robert Cullen, JosÃ© Luis Ucha	1
s8	Sankofa	Haile Gerima	1
s9	The Great British Baking Show	Andy Devonshire	1
s10	The Starling	Theodore Melfi	1
s11	Vendetta: Truth, Lies and The M...	none	38
s12	Bangkok Breaking	Kongkiat Komesiri	1
s13	Je Suis Karl	Christian Schwochow	1
s14	Confessions of an Invisible Girl	Bruno Garotti	1
s15	Crime Stories: India Detectives	none	38
s16	Dear White People	none	38
s17	Europe's Most Dangerous Man: ...	Pedro de Echave GarcÃ-a, Pabl...	1
s18	Falsa identidad	none	38

9. Write a query to find the total number of titles for each country. Display country and the count of titles.

```
28 •    SELECT country, COUNT(*) AS title_count FROM netflix GROUP BY country;
29
30      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

country	title_count
United States	17
South Africa	1
none	40
India	6
United States, Ghana, Burkina Faso, United Kin...	1
United Kingdom	5
Germany, Czech Republic	1
Mexico	1
Turkey	1
Australia	1
United States, India, France	1
Finland	1
China, Canada, United States	1
South Africa, United States, Japan	1
Nigeria	2
Japan	13
Spain, United States	1
France	1
Belgium	1

10. Write a query using a CASE statement to categorize titles into three categories based on their rating: Family for ratings G, PG, PG-13, Kids for TV-Y, TV-Y7, TV-G, and Adult for all other ratings.

```
29 ● ⊖    SELECT title, rating,       CASE
30        WHEN rating IN ('G', 'PG', 'PG-13') THEN 'Family'
31        WHEN rating IN ('TV-Y', 'TV-Y7', 'TV-G') THEN 'Kids'
32        ELSE 'Adult'
33        END AS category FROM netflix;
34
35        #jeshwanth
```

| Result Grid | 🔢 ↻ Filter Rows: | | Export: 🖫 | Wrap Cell Content: 🗛 |

title	rating	category
▶ Dick Johnson Is Dead	PG-13	Family
Blood & Water	TV-MA	Adult
Ganglands	TV-MA	Adult
Jailbirds New Orleans	TV-MA	Adult
Kota Factory	TV-MA	Adult
Midnight Mass	TV-MA	Adult
My Little Pony: A New Generation	PG	Family
Sankofa	TV-MA	Adult
The Great British Baking Show	TV-14	Adult
The Starling	PG-13	Family
Vendetta: Truth, Lies and The M...	TV-MA	Adult
Bangkok Breaking	TV-MA	Adult
Je Suis Karl	TV-MA	Adult
Confessions of an Invisible Girl	TV-PG	Adult
Crime Stories: India Detectives	TV-MA	Adult
Dear White People	TV-MA	Adult
Europe's Most Dangerous Man: ...	TV-MA	Adult
Falsa identidad	TV-MA	Adult
Intrusion	TV-14	Adult

11. Write a query to add a new column title_length to the titles table that calculates the length of each title.

```
34        #jeshwanth|
35  ●     ALTER TABLE netflix ADD COLUMN title_length INT;
36  ●     desc netflix;
```

Result Grid | Filter Rows: [   ] | Export: | Wrap Cell Content: ΙΑ

Field	Type	Null	Key	Default	Extra
show_id	text	YES		NULL	
type	text	YES		NULL	
title	text	YES		NULL	
director	text	YES		NULL	
cast	text	YES		NULL	
country	text	YES		NULL	
date_added	text	YES		NULL	
release_year	int	YES		NULL	
rating	text	YES		NULL	
duration	text	YES		NULL	
listed_in	text	YES		NULL	
description	text	YES		NULL	
title_length	int	YES		NULL	

12. Write a query using an advanced function to find the title with the longest duration in minutes.

```
36  ●      SELECT title,
37   ⊝   CASE
38   ⊝   WHEN duration LIKE '%Season%' THEN CAST(LEFT(duration, LOCATE(' ', duration) - 1)
39      ⌐ AS UNSIGNED) * 400
40        ELSE CAST(LEFT(duration, LOCATE(' ', duration) - 1) AS UNSIGNED)
41      ⌐ END AS duration_in_minutes FROM netflix ORDER BY duration_in_minutes DESC LIMIT 1;
42       |#jeshwanth
```

| Result Grid | Filter Rows: [   ] | Export: | Wrap Cell Content: ΙΑ | Fetch rows: |

title	duration_in_minutes
The Great British Baking Show	3600

13. Create a view named RecentTitles that includes titles added in the last 30 days.

```
42 •    CREATE VIEW RecentTitles
43      AS SELECT *FROM netflix
44       WHERE STR_TO_DATE(date_added, '%M %d, %Y') >= CURDATE() - INTERVAL 30 DAY;
45 •     show tables;
46      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Tables_in_netflix
▶ netflix
recenttitles

14. Write a query using a window function to rank titles based on their release_year within each country.

```
46 •    SELECT show_id, title, country, release_year,
47      RANK() OVER (PARTITION BY country ORDER BY release_year DESC)
48       AS rank_within_country FROM netflix;
49      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

show_id	title	country	release_year	rank_within_country
s26	Love on the Spectrum	Australia	2021	1
s93	Into the Night	Belgium	2021	1
s39	Birth of the Dragon	China, Canada, United States	2017	1
s38	Angry Birds	Finland	2018	1
s92	The Women and the Murderer	France	2021	1
s100	On the Verge	France, United States	2021	1
s13	Je Suis Karl	Germany, Czech Republic	2021	1
s40	Chhota Bheem	India	2021	1
s5	Kota Factory	India	2021	1
s70	Stories by Rabindranath Tagore	India	2015	3
s67	Raja Rasoi Aur Anya Kahaniyan	India	2014	4
s51	Dharmakshetra	India	2014	4
s25	Jeans	India	1998	6
s77	Yowamushi Pedal	Japan	2013	1
s57	Naruto Shippuden the Movie: B...	Japan	2011	2
s61	Naruto Shippuden: The Movie: ...	Japan	2010	3
s59	Naruto ShippÃ»den the Movie: ...	Japan	2009	4
s58	Naruto ShippÃ»den the Movie: ...	Japan	2008	5
s60	Naruto Shippuden: The Movie	Japan	2007	6

15. Write a query to calculate the cumulative count of titles added each month sorted by date_added.

```
49 •    SELECT
50         date_added,
51         COUNT(*) AS titles_added,
52         SUM(COUNT(*)) OVER (ORDER BY date_added) AS cumulative_titles
53      FROM netflix
54      GROUP BY date_added
55      ORDER BY date_added;
56      #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

date_added	titles_added	cumulative_titles
September 10, 2021	8	8
September 11, 2021	3	11
September 14, 2021	5	16
September 15, 2021	22	38
September 16, 2021	12	50
September 17, 2021	7	57
September 19, 2021	2	59
September 20, 2021	1	60
September 21, 2021	5	65
September 22, 2021	9	74
September 23, 2021	2	76
September 24, 2021	10	86
September 25, 2021	1	87
September 7, 2021	4	91

16. Write a stored procedure to update the rating of a title given its show_id and new rating.

```
1  ⊖ DELIMITER //CREATE PROCEDURE UpdateRating(IN p_show_id VARCHAR(10), IN p_new_rating
2       VARCHAR(10))BEGIN
3       UPDATE netflix    SET rating = p_new_rating    WHERE show_id = p_show_id;
4    └  END    //DELIMITER ;|
5 •    #jeshwanth
```

17. Write a query to find the country with the highest average rating for titles. Use subqueries and aggregate functions to achieve this.

```
5 • ⊖    SELECT country, AVG(
6   ⊖  CASE
7         WHEN rating LIKE 'TV%' THEN NULL
8         WHEN rating = 'G' THEN 1
9         WHEN rating = 'PG' THEN 2
10        WHEN rating = 'PG-13' THEN 3
11        WHEN rating = 'R' THEN 4
12        ELSE 5
13     └  END) AS avg_rating FROM netflix GROUP BY country ORDER BY avg_rating DESC LIMIT 1;
14        #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA | Fetch rows:

country	avg_rating
South Africa, United States, Japan	4.0000

18. Write a query to find pairs of titles from the same country where one title has a higher rating than the other. Display columns for show_id_1, title_1, rating_1, show_id_2, title_2, and rating_2.

```sql
14 •  SELECT t1.show_id AS
15     show_id_1, t1.title AS title_1, t1.rating AS rating_1,
16     t2.show_id AS show_id_2, t2.title AS title_2, t2.rating AS rating_2
17     FROM netflix t1 JOIN netflix t2 ON t1.country = t2.country AND t1.rating > t2.rating;
18
19     #jeshwanth
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\boxed{A}$

show_id_1	title_1	rating_1	show_id_2	title_2	rating_2
s98	Kid Cosmic	TV-Y7	s1	Dick Johnson Is Dead	PG-13
s97	If I Leave Here Tomorrow: A Film About Lynyrd ...	TV-MA	s1	Dick Johnson Is Dead	PG-13
s83	Lucifer	TV-14	s1	Dick Johnson Is Dead	PG-13
s82	Kate	R	s1	Dick Johnson Is Dead	PG-13
s68	Saved by the Bell	TV-PG	s1	Dick Johnson Is Dead	PG-13
s56	Nailed It	TV-PG	s1	Dick Johnson Is Dead	PG-13
s49	Training Day	R	s1	Dick Johnson Is Dead	PG-13
s41	He-Man and the Masters of the Universe	TV-Y7	s1	Dick Johnson Is Dead	PG-13
s16	Dear White People	TV-MA	s1	Dick Johnson Is Dead	PG-13
s90	Mighty Raju	TV-Y7	s3	Ganglands	TV-MA
s88	Titipo Titipo	TV-Y	s3	Ganglands	TV-MA
s86	PokÃ©mon Master Journeys: The Series	TV-Y7	s3	Ganglands	TV-MA

Result 33 ×