## salakila Database SQL Analysis

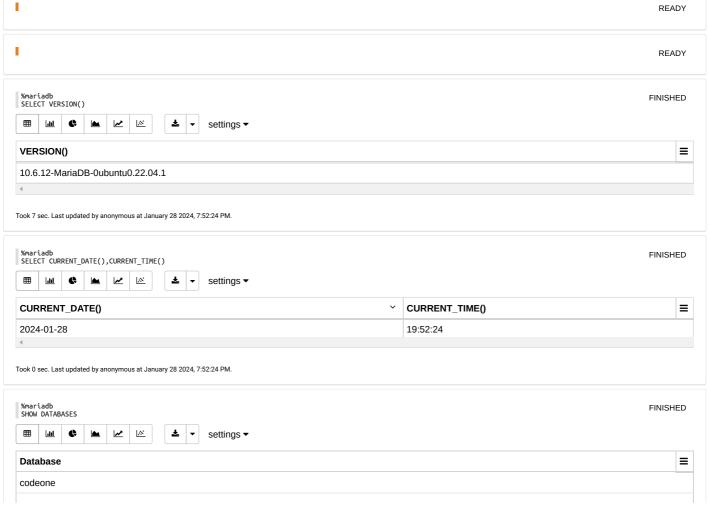
FINISHED

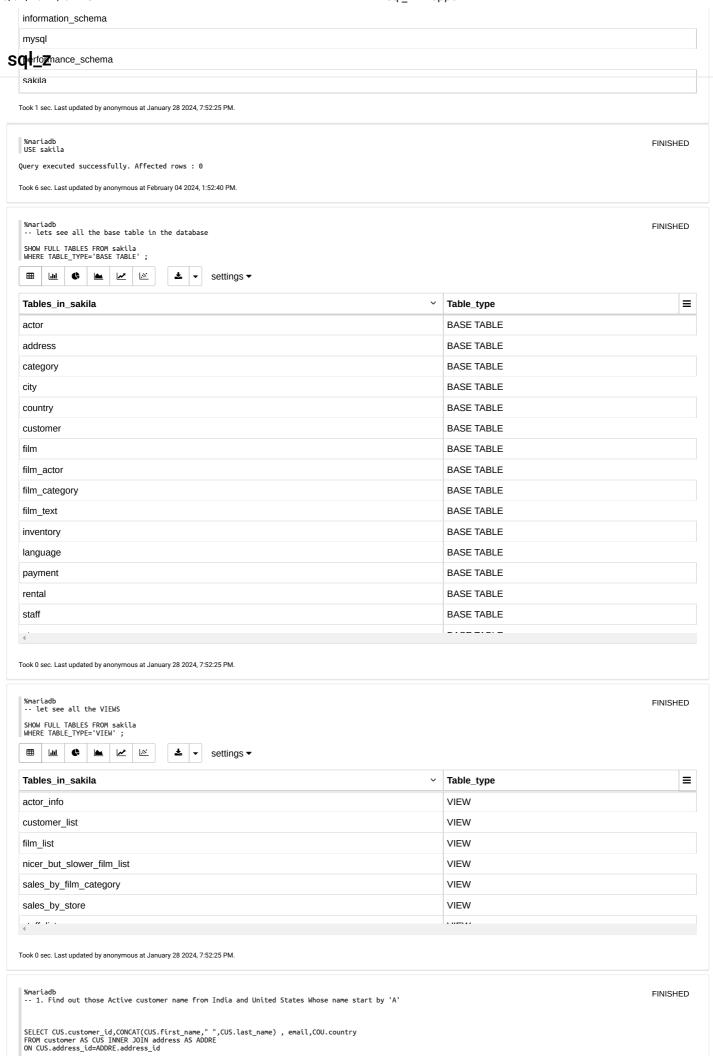
In this notebook, I perform a data analysis using the Mariadb SQL language on the Sakila database. The Sakila database is a sample database that represents a DVD rental store. The analysis aims to answer various questions related to the Sakila database and gain insights from the data.

## **Analysis Questions**

- 1. Find out those Active customer name from India and United States Whose name start by 'A'.
- 2. Find out top five category film according to number of flim.
- 3. Find out the language which ussed in all 'Sports' category movies
- 4. Find out the total amount (round off 2 decimal place) in between '2006-02-15' to '2005-02-15'
- 5. Find out all the film name in lowercase which movie have 'Trailers' by extracting and print in a single line.
- 6. Find out average time in between rental date and return date
- 7. Find out total number of rental order which yet not returned
- 8. Findout the the payment\_id of the rental\_id =100
  9.Find out the film name which earn most with the amount value
- 9. The name of film and amount which earned most
- 10. Find out actor's who participate in the most earned movie 'telegraph voyage'?
- 11. Find out how many copies of film 'telegraph voyage' exist in the inventory system
- 12. Find out what is the total amount paid by each customer for all their rental?
- 13. Find out how many films from each category each store has?
- 14. Calculate the total revenue of each store
- 15. Find out top 5 customers who have rented the most number of films, and rank them based on the total number of films rented?

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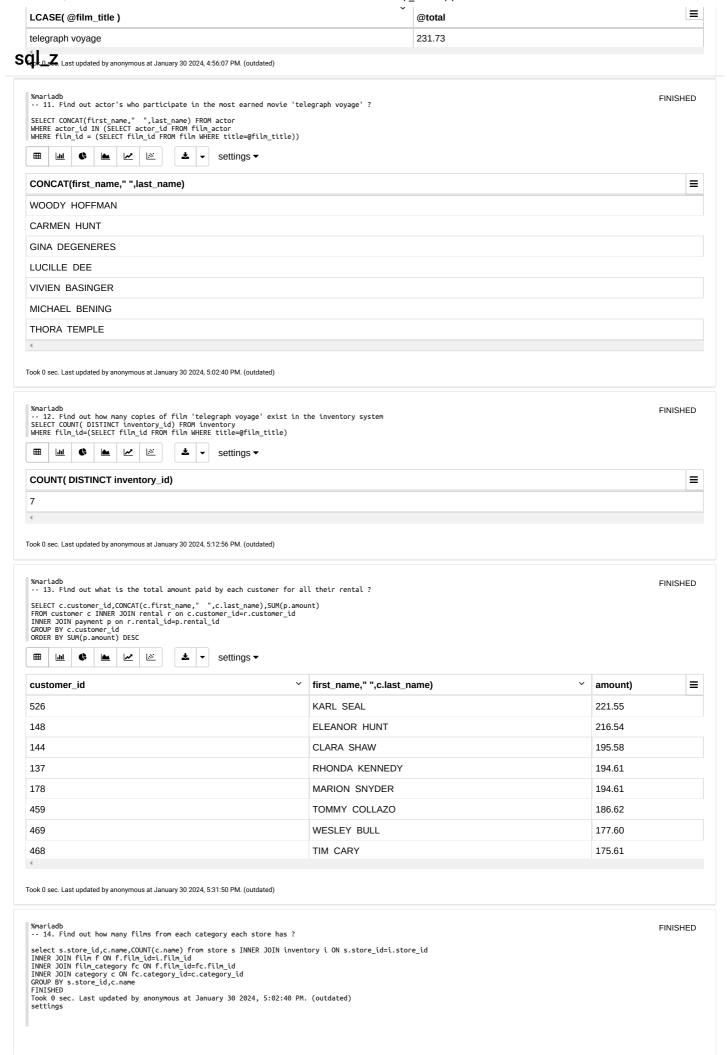


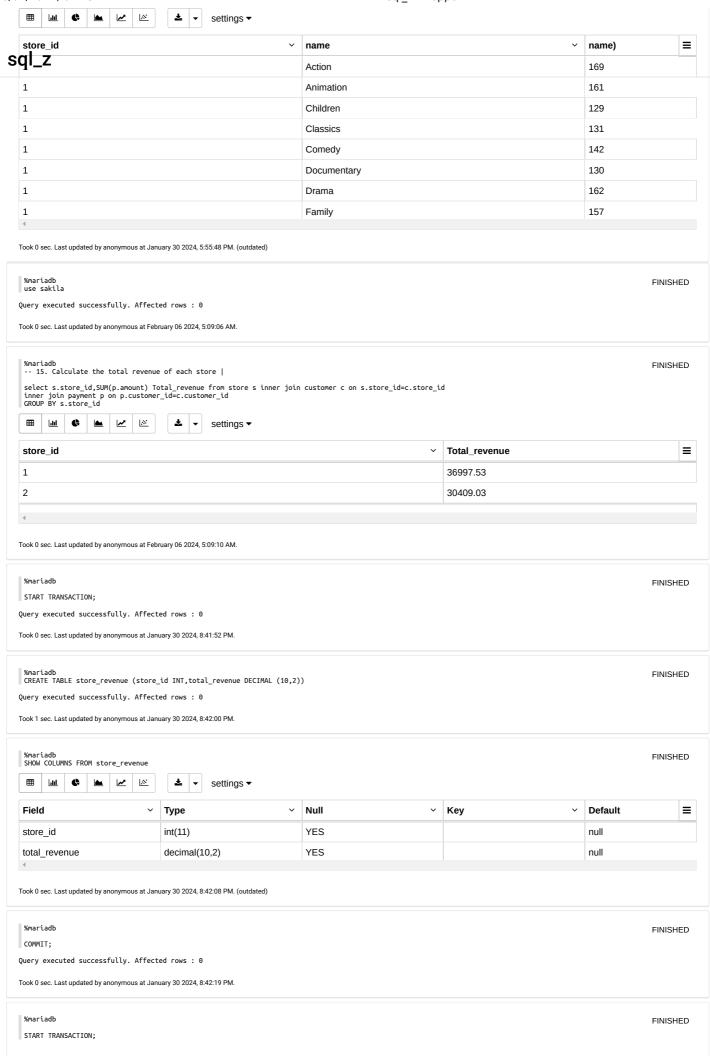


INNER JOIN city
ON ADDRE.city\_id=city.city\_id
INNER JOIN country AS COU
ON city\_country\_id
NHEDE CIS active = 1 AND COUncountry\_id
NHEDE CIS active = 1 AND COUncountry\_id sqŧ\_z<u>⊪</u> **±** settings first\_name," ",CUS.last\_name) coun Es/ customer\_id email 367 ADAM GOOCH ADAM.GOOCH@sakilacustomer.org India ANNETTE OLSON India 175 ANNETTE.OLSON@sakilacustomer.org 225 ARLENE HARVEY ARLENE.HARVEY@sakilacustomer.org India ALLEN BUTTERFIELD ALLEN.BUTTERFIELD@sakilacustomer.org India 412 136 ANITA MORALES ANITA.MORALES@sakilacustomer.org India AMY LOPEZ India 32 AMY.LOPEZ@sakilacustomer.org 152 ALICIA MILLS ALICIA.MILLS@sakilacustomer.org India AGNES BISHOP 217 AGNES.BISHOP@sakilacustomer.org India Took 0 sec. Last updated by anonymous at January 28 2024, 7:52:25 PM. (outdated) %mariadb  $\,$  -- 2. Find out top five category film according to number of flim FINISHED -- concept applied:: join/group by / having / order by select cat.name AS category,COUNT(film.film\_id ) AS frequency
FROM film INNER JOIN film\_category AS fl\_cat
ON film.film\_id=fl\_cat.film\_id
INNER JOIN category AS cat
ON fl\_cat.category\_id=cat.category\_id
GROUP BY category
HAVING frequency > 60
ORDER BY frequency DESC
INNIT S ITMTT 5  $\blacksquare$ <u>~</u> \* hh settings ▼ ≡ category frequency Sports 74 Foreign 73 69 Family 68 Documentary 66 Animation Took 0 sec. Last updated by anonymous at January 28 2024, 7:52:25 PM. (outdated) Now It is understand that the 'Sports' Type of category flim are most popular. FINISHED Took 0 sec. Last updated by anonymous at January 28 2024, 12:26:14 AM. (outdated) %mariadb
--3. Find out the language which ussed in all 'Sports' category movies **FINISHED** -- concept applied:: Nested Loop / filtering SELECT language\_id,name FROM language WHERE language\_id IN (SELECT language\_id FROM film WHERE film id IN (SELECT film\_id FROM film\_category WHERE category\_id= (SELECT category\_id from category where name ='Sports'))) ⊞ ¢ Ŧ dd <u>~~</u> **.** - | settings ▼ language\_id name ≡ English 1 Took 0 sec. Last updated by anonymous at January 28 2024, 7:52:26 PM. (outdated) **FINISHED** ▦ 1 **/**\* Ŧ settings hid Field Type Null Key Default ≡ PRI NO payment\_id smallint(5) unsigned null customer\_id smallint(5) unsigned NO MUL null

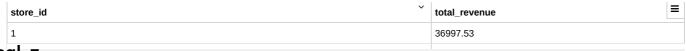
staff_id	tinyint(3) unsigned	NO	MUL	null
rental_id	int(11)	YES	MUL	null
<b>(4</b> 1 <u>10.0</u> 21t	decimal(5,2)	NO		null
payment_date	datetime	NO		null
last_update	timestamp	NO		current_timestamp()
	ound off 2 decimal place) in betwee ion/ string function / logical oper ," ","\$") FROM payment 2-15' AND '2006-02-16' ★ ▼ settings ▼			FINISHED
Took 0 sec. Last updated by anonymous at Janu  *mariadb 5. Find out all the film name i concept applied:: string functi  SELECT CONCAT(LCASE(title)," (",S FROM film WHERE special_features LIKE 'T%s'	n lowercase which movie have 'Trail on/ wildcard / LIKE	ers' by extracting and print in a s	ingle line.	FINISHED
CONCAT(LCASE(title)," (",SUB: ace goldfinger (Trailers) adaptation holes (Trailers)	STR(special_features,1,8), ")")			=
airplane sierra (Trailers)				
airport pollock (Trailers)				
alabama devil (Trailers)				
	ween rental date and return date / numeric function / string functi	on ," Average Rental time <- OUTPUT")	FROM rental	FINISHED
CONCAT(ROUND(AVG(DATEDI	FF(return_date,rental_date)),0),'	' days"," Average Rental time <-	OUTPUT")	=
5 days Average Rental time <- Ol		<u> </u>	,	
Took 0 sec. Last updated by anonymous at Janu	uary 28 2024, 7:52:26 PM. (outdated)			
SELECT COUNT(rental_id) from renta where return_date IS NULL	returned then the return_date is N	ULL		FINISHED
COLINIT(rontal id)	<b>≛</b> ▼ settings ▼			_
COUNT(rental_id)				=
183				
Took 0 sec. Last updated by anonymous at Janu	uary 28 2024, 8:01:05 PM. (outdated)			
%mariadb	f the rental_id =100			FINISHED

SET @x=100; -- that '@x' variable's value stroed in database SELECT payment id, amount FROM payment Query executed successfully. Affected rows : 0 Nsettings ▼ ≡ payment\_id amount 5630 4.99 Took 0 sec. Last updated by anonymous at January 28 2024, 10:27:14 PM. (outdated) %mariadb --- let see what the value of that variable '@x' Select @x FINISHED  $\blacksquare$ **~**  $\sim$ Ŧ ≡ @x 100 Took 0 sec. Last updated by anonymous at January 28 2024, 10:28:46 PM. (outdated) %mariadb CREATE PROCEDURE pay(x int) SELECT \* FROM payment LIMIT 10 **FINISHED** Query executed successfully. Affected rows :  $\boldsymbol{\theta}$ Took 1 sec. Last updated by anonymous at January 28 2024, 10:43:28 PM. (outdated) %mariadb FINISHED SHOW COLUMNS FROM payment  $\otimes$ settings ~ ~ ≡ ∨ Key Default Field Type ✓ Null payment\_id smallint(5) unsigned NO PRI null customer\_id smallint(5) unsigned NO MUL null staff id tinyint(3) unsigned NO MUL null rental\_id int(11) YES MUL null decimal(5,2) NO amount null payment\_date datetime NO null NO last\_update timestamp current timestamp() Took 0 sec. Last updated by anonymous at January 29 2024, 5:25:30 PM. (outdated) %mariadb
-- 9.Find out the film name which earn most with the amount value FRROR SET @film\_title='';
SET @total=0;
Query executed successfully. Affected rows : 0 %mariadb
SELECT f.title,SUM(p.amount) AS total\_amount INTO @film\_title, @total
FROM rental r INNER JOIN payment p
ON r.rental\_id=p.rental\_id INNER JOIN inventory i
ON r.inventory\_id=i.inventory\_id INNER JOIN film f
ON i.film\_id=f.film\_id
GROUP BY f.title
ORDER BY total\_amount DESC
LIMIT 1 FINISHED Query executed successfully. Affected rows : 1Took 0 sec. Last updated by anonymous at January 30 2024, 4:56:04 PM %mariadb -- 10. The name of film and amount which earned most FINISHED SELECT LCASE( @film\_title ),@total settings ▼





Query executed successfully. Affected rows :  $\theta$ Took 0 sec. Last updated by anonymous at January 30 2024, 8:42:28 PM. sql\_z FINISHED INSERT INTO store\_revenue (store\_id.total\_revenue)
VALUES (1,36997.53),(2,100) Query executed successfully. Affected rows : 2 Took 0 sec. Last updated by anonymous at January 30 2024, 8:42:32 PM. %mariadb SELECT \* FROM store\_revenue FINISHED settings ~ dd ~~ **.**\* ≡ store\_id total revenue 36997.53 1 Took 0 sec. Last updated by anonymous at January 30 2024, 8:42:37 PM. (outdated) %mariadb -- there is a mistake to insert the values, GET BACK TO THE NODE BY ROLLBACK FINISHED ROLLBACK ; Query executed successfully. Affected rows: 0 Took 0 sec. Last updated by anonymous at January 30 2024, 8:43:32 PM. (outdated) FINISHED INSERT INTO store\_revenue (store\_id,total\_revenue) VALUES (2,100) Query executed successfully. Affected rows :  $\mathbf{1}$ Took 0 sec. Last updated by anonymous at January 30 2024, 8:44:46 PM. %mariadb FINISHED ROLLBACK: Query executed successfully. Affected rows : 0 Took 0 sec. Last updated by anonymous at January 30 2024, 8:45:06 PM. %mariadb FINISHED INSERT INTO store\_revenue (store\_id,total\_revenue) VALUES (1,36997.53),(2,30409.03) Query executed successfully. Affected rows : 2  $\,$ Took 0 sec. Last updated by anonymous at January 30 2024, 8:45:56 PM. %mariadb FINISHED SELECT \* FROM store\_revenue  $\blacksquare$ ₹ dil **~~ .** settings ▼ store\_id total\_revenue ≡ 2 100.00 36997.53 1 2 30409.03 Took 0 sec. Last updated by anonymous at January 30 2024, 8:46:11 PM. (outdated) %mariadb
DELETE FROM store\_revenue where total\_revenue=100.00 FINISHED Query executed successfully. Affected rows :  ${\bf 1}$ Took 0 sec. Last updated by anonymous at January 30 2024, 8:51:41 PM. %mariadb
select \* from store\_revenue FINISHED ılıl **±** settings ▼



sql\_z

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%mariadb FINISHED

COMMIT;

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Query executed successfully. Affected rows: 0

Took 0 sec. Last updated by anonymous at January 30 2024, 8:52:27 PM

%mariadb
-- 16. Find out top 5 customers who have rented the most number of films, and rank them based on the total number of films rented? FINISHED SELECT c.customer\_id, CONCAT(c.first\_name, ' ', c.last\_name),
RANK() OVER (ORDER BY COUNT(r.rental\_id) DESC) AS rental\_rank,COUNT(r.rental\_id) AS total\_rentals RANK() OVER (UNDER D. COLL.)

FRANK() OVER (UNDER D. COLL.)

JOIN rental r ON c.customer\_id = r.customer\_id

GROUP BY c.customer\_id

ORDER BY rental\_rank

LIMIT 5;



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SELECT

f.film\_id,
f.title,
c.name AS category,
f.rental\_rate,
SUM(f.rental\_rate) OVER (partition by f.title order by f.title) AS total\_revenue,
SUM(f.rental\_rate) OVER (PARTITION BY c.name ORDER BY f.rental\_rate DESC) AS total\_category\_revenue,
RANK() OVER (PARTITION BY c.name ORDER BY f.rental\_rate DESC) AS rank\_within\_category
FROM

TAMMY SANDERS

category c ON fc.category\_id = c.category\_id ORDER BY

c.name, rank\_within\_category;

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film_id	title	category	rental_rate ~	total_revenue ~	total_category_rever⊞e
271	EASY GLADIATOR	Action	4.99	4.99	84.83
212	DARN FORRESTER	Action	4.99	4.99	84.83
501	KISSING DOLLS	Action	4.99	4.99	84.83
21	AMERICAN CIRCUS	Action	4.99	4.99	84.83
964	WATERFRONT DELIVERANCE	Action	4.99	4.99	84.83
911	TRIP NEWTON	Action	4.99	4.99	84.83
253	DRIFTER COMMANDMENTS	Action	4.99	4.99	84.83

Took 0 sec. Last updated by anonymous at February 04 2024, 2:14:07 PM. (outdated)

%mariadb -- 18. Find out the number of rentals, total revenue, and average rental duration for each month with each year ! SELECT
YEAR(r.rental\_date) AS rental\_year,
MONTH(r.rental\_date) AS rental\_month,

**FINISHED** 

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COUNT(r.rental\_id) OVER (PARTITION BY YEAR(r.rental\_date), MONTH(r.rental\_date)) AS total\_rentals,
SUM(p.amount) OVER (PARTITION BY YEAR(r.rental\_date), MONTH(r.rental\_date)) AS total\_revenue,
AVG(r.return\_date - r.rental\_date) OVER (PARTITION BY YEAR(r.rental\_date), MONTH(r.rental\_date)) AS average\_rental\_duration
FROM
rental r

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rental_year ~	rental_month v	total_rentals v	total_revenue ⊒
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44
2005	5	1156	4823.44

Took 0 sec. Last updated by anonymous at February 04 2024, 2:27:32 PM. (outdated)

%mariadb READY