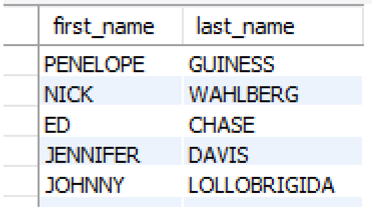
Final Sakila Analysis

Figures only show the first 5 results

```
USE sakila;
```

1a. You need a list of all the actors who have Display the first and last names of all actors from the table actor.

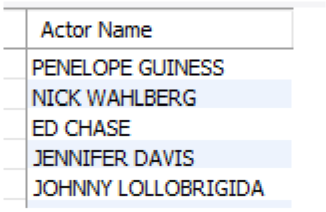
```
SELECT first_name, last_name
FROM actor;
```



first_name	last_name
PENELOPE	GUINESS
NICK	WAHLBERG
ED	CHASE
JENNIFER	DAVIS
JOHNNY	LOLLOBRIGIDA

1b. Display the first and last name of each actor in a single column in upper case letters. Name the column Actor Name.

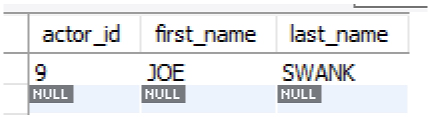
```
SELECT UPPER(CONCAT(first_name, ' ', last_name)) AS 'Actor Name'
FROM actor;
```



Actor Name
PENELOPE GUINESS
NICK WAHLBERG
ED CHASE
JENNIFER DAVIS
JOHNNY LOLLOBRIGIDA

2a. You need to find the ID number, first name, and last name of an actor, of whom you know only the first name, "Joe." What is one query would you use to obtain this information?

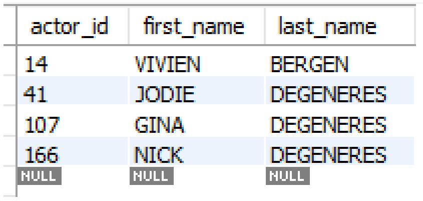
```
SELECT actor_id, first_name, last_name
FROM actor
WHERE first_name = 'JOE';
```



actor_id	first_name	last_name
9	JOE	SWANK
NULL	NULL	NULL

2b. Find all actors whose last name contain the letters GEN:

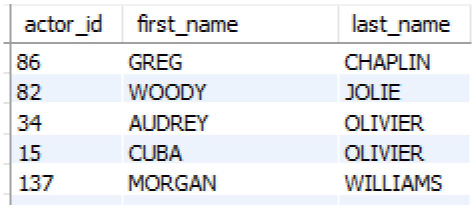
```
SELECT actor_id, first_name, last_name
FROM actor
WHERE last_name LIKE '%GEN%';
```



actor_id	first_name	last_name
14	VIVIEN	BERGEN
41	JODIE	DEGENERES
107	GINA	DEGENERES
166	NICK	DEGENERES
NULL	NULL	NULL

2c. Find all actors whose last names contain the letters LI. This time, order the rows by last name and first name, in that order:

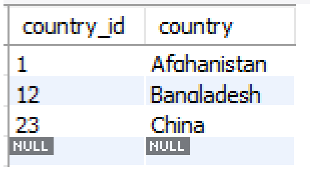
```
SELECT actor_id, first_name, last_name
FROM actor
WHERE last_name LIKE '%LI%'
ORDER BY last_name, first_name;
```



actor_id	first_name	last_name
86	GREG	CHAPLIN
82	WOODY	JOLIE
34	AUDREY	OLIVIER
15	CUBA	OLIVIER
137	MORGAN	WILLIAMS

2d. Using IN, display the country_id and country columns of the following countries: Afghanistan, Bangladesh, and China:

```
SELECT country_id, country
FROM country
WHERE country IN ('Afghanistan', 'Bangladesh', 'China');
```

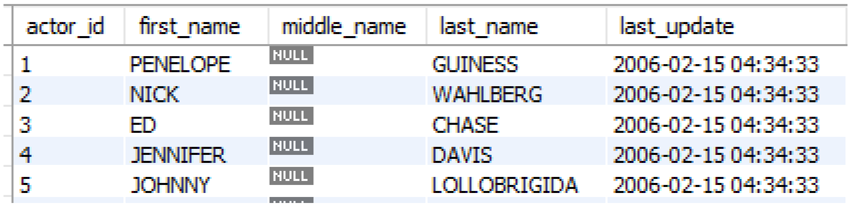


country_id	country
1	Afghanistan
12	Bangladesh
23	China
NULL	NULL

3a. Add a middle_name column to the table actor. Position it between first_name and last_name. Hint: you will need to specify the data type.

```
SELECT * FROM actor;

ALTER TABLE actor
ADD COLUMN middle_name VARCHAR(50) AFTER first_name;
```



actor_id	first_name	middle_name	last_name	last_update
1	PENELOPE	NULL	GUINESS	2006-02-15 04:34:33
2	NICK	NULL	WAHLBERG	2006-02-15 04:34:33
3	ED	NULL	CHASE	2006-02-15 04:34:33
4	JENNIFER	NULL	DAVIS	2006-02-15 04:34:33
5	JOHNNY	NULL	LOLLOBRIGIDA	2006-02-15 04:34:33

3b. You realize that some of these actors have tremendously long last names. Change the data type of the middle_name column to blobs.

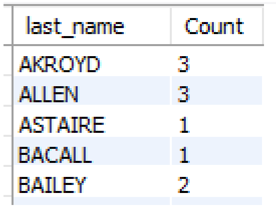
```
ALTER TABLE actor
MODIFY COLUMN middle_name BLOB;
```

3c. Now delete the middle_name column.

```
ALTER TABLE actor
DROP COLUMN middle_name;
```

#4a. List the last names of actors, as well as how many actors have that last name.

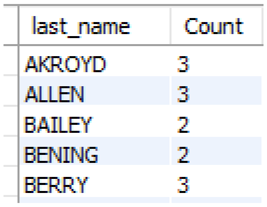
```
SELECT last_name, COUNT(*) AS 'Count'
FROM actor
GROUP BY last_name;
```



last_name	Count
AKROYD	3
ALLEN	3
ASTAIRE	1
BACALL	1
BAILEY	2

#4b. List last names of actors and the number of actors who have that last name, but only for names that are shared by at least two actors.

```
SELECT last_name, COUNT(*) AS 'Count'
FROM actor
GROUP BY last_name
HAVING Count >= 2;
```



last_name	Count
AKROYD	3
ALLEN	3
BAILEY	2
BENING	2
BERRY	3

#4c. Oh, no! The actor HARPO WILLIAMS was accidentally entered in the actor table as GROUCHO WILLIAMS, the name of Harpo's second cousin's husband's yoga teacher. Write a query to fix the record.

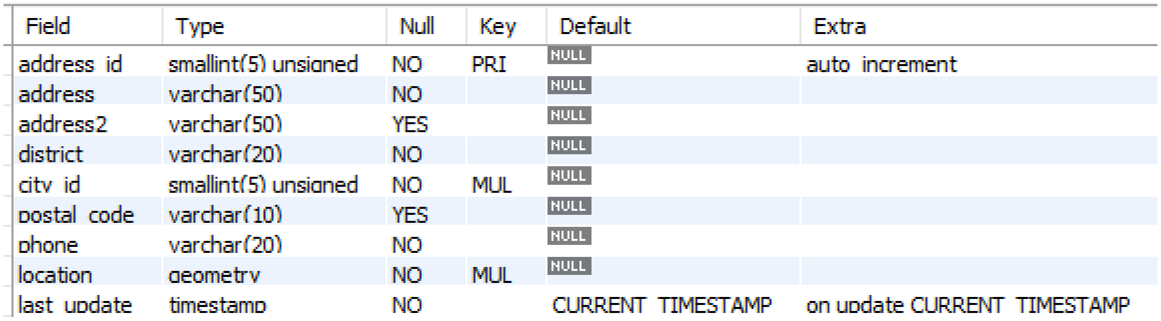
```
SELECT * FROM actor;
UPDATE actor
SET first_name = 'HARPO'
WHERE first_name = 'GROUCHO' AND last_name = 'WILLIAMS';
```

#4d. Perhaps we were too hasty in changing GROUCHO to HARPO. It turns out that GROUCHO was the correct name after all! In a single query, if the first name of the actor is currently HARPO, change it to GROUCHO. Otherwise, change the first name to MUCHO GROUCHO, as that is exactly what the actor will be with the grievous error. BE CAREFUL NOT TO CHANGE THE FIRST NAME OF EVERY ACTOR TO MUCHO GROUCHO, HOWEVER! (Hint: update the record using a unique identifier.)

```
UPDATE actor
SET first_name =
CASE
WHEN first_name = 'HARPO'
THEN 'GROUCHO'
ELSE 'MUCHO GROUCHO'
END
WHERE actor_id = 172;
```

#5a. You cannot locate the schema of the address table. Which query would you use to re-create it?

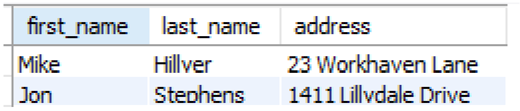
DESCRIBE sakila.address;



Field	Type	Null	Key	Default	Extra
address_id	smallint(5) unsigned	NO	PRI	NULL	auto_increment
address	varchar(50)	NO		NULL	
address2	varchar(50)	YES		NULL	
district	varchar(20)	NO		NULL	
city_id	smallint(5) unsigned	NO	MUL	NULL	
postal_code	varchar(10)	YES		NULL	
phone	varchar(20)	NO		NULL	
location	geometry	NO	MUL	NULL	
last_update	timestamp	NO		CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP

#6a. Use JOIN to display the first and last names, as well as the address, of each staff member. Use the tables staff and address:

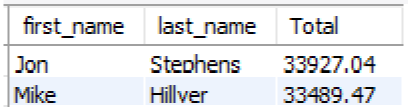
```
SELECT first_name, last_name, address
FROM staff s
INNER JOIN address a
ON s.address_id = a.address_id;
```



first_name	last_name	address
Mike	Hillyer	23 Workhaven Lane
Jon	Stephens	1411 Lillydale Drive

#6b. Use JOIN to display the total amount rung up by each staff member in August of 2005. Use tables staff and payment.

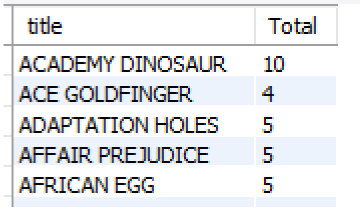
```
SELECT first_name, last_name, SUM(amount) AS 'Total'
FROM staff s
INNER JOIN payment p
ON s.staff_id = p.staff_id
GROUP BY s.first_name, s.last_name;
```



first_name	last_name	Total
Jon	Stephens	33927.04
Mike	Hillyer	33489.47

#6c. List each film and the number of actors who are listed for that film. Use tables film_actor and film. Use inner join.

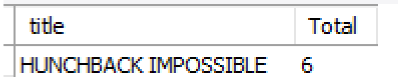
```
SELECT title, COUNT(actor_id) AS 'Total'
FROM film f
INNER JOIN film_actor a
ON f.film_id = a.film_id
GROUP BY f.title;
```



title	Total
ACADEMY DINOSAUR	10
ACE GOLDFINGER	4
ADAPTATION HOLES	5
AFFAIR PREJUDICE	5
AFRICAN EGG	5

#6d. How many copies of the film Hunchback Impossible exist in the inventory system?

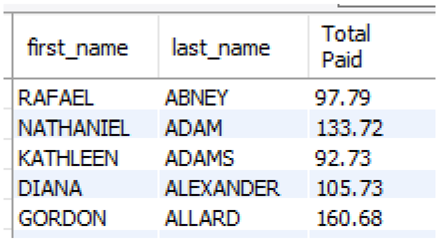
```
SELECT title, COUNT(inventory_id) AS 'Total'
FROM film f
INNER JOIN inventory i
ON f.film_id = i.film_id
WHERE title = "Hunchback Impossible";
```



title	Total
HUNCHBACK IMPOSSIBLE	6

#6e. Using the tables payment and customer and the JOIN command, list the total paid by each customer. List the customers alphabetically by last name:

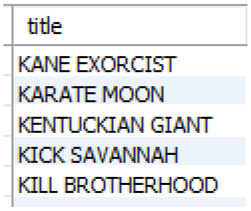
```
SELECT first_name, last_name, SUM(amount) AS 'Total Paid'
FROM payment p
INNER JOIN customer c
ON p.customer_id = c.customer_id
GROUP BY p.customer_id
ORDER BY last_name ASC;
```



first_name	last_name	Total Paid
RAFAEL	ABNEY	97.79
NATHANIEL	ADAM	133.72
KATHLEEN	ADAMS	92.73
DIANA	ALEXANDER	105.73
GORDON	ALLARD	160.68

#7a. The music of Queen and Kris Kristofferson have seen an unlikely resurgence. As an unintended consequence, films starting with the letters K and Q have also soared in popularity. Use subqueries to display the titles of movies starting with the letters K and Q whose language is English.

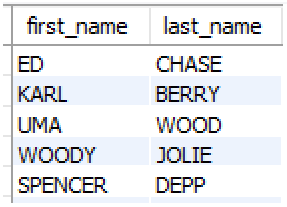
```
SELECT title
FROM film
WHERE language_id IN
   (SELECT language_id
   FROM language
   WHERE name = "English")
 AND (title LIKE 'K%') OR (title LIKE 'Q%');
```



title
KANE EXORCIST
KARATE MOON
KENTUCKIAN GIANT
KICK SAVANNAH
KILL BROTHERHOOD

#7b. Use subqueries to display all actors who appear in the film Alone Trip.

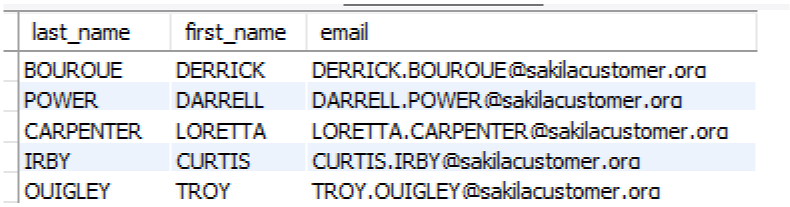
```
SELECT first_name, last_name
FROM actor
WHERE actor_id IN
(SELECT actor_id
FROM film_actor
          WHERE film_id IN
          (SELECT film_id
          FROM film
                    WHERE title = "Alone Trip"));
```



first_name	last_name
ED	CHASE
KARL	BERRY
UMA	WOOD
WOODY	JOLIE
SPENCER	DEPP

#7c. You want to run an email marketing campaign in Canada, for which you will need the names and email addresses of all Canadian customers. Use joins to retrieve this information.

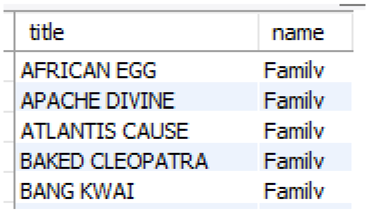
```
SELECT last_name, first_name, email
FROM customer
INNER JOIN customer_list
ON customer.customer_id = customer_list.ID
WHERE customer_list.country = 'Canada';
```



last_name	first_name	email
BOUROUE	DERRICK	DERRICK.BOUROUE@sakilacustomer.ora
POWER	DARRELL	DARRELL.POWER@sakilacustomer.ora
CARPENTER	LORETTA	LORETTA.CARPENTER@sakilacustomer.ora
IRBY	CURTIS	CURTIS.IRBY@sakilacustomer.ora
OUIGLEY	TROY	TROY.OUIGLEY@sakilacustomer.ora

#7d. Sales have been lagging among young families, and you wish to target all family movies for a promotion. Identify all movies categorized as family films.

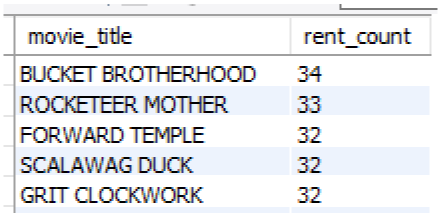
```
SELECT title, name
FROM category, film, film_category
WHERE category.category_id = film_category.category_id
AND film_category.film_id = film.film_id
AND name = 'Family';
```



title	name
AFRICAN EGG	Familv
APACHE DIVINE	Familv
ATLANTIS CAUSE	Familv
BAKED CLEOPATRA	Familv
BANG KWAI	Familv

#7e. Display the most frequently rented movies in descending order.

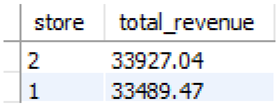
```
SELECT title AS 'movie_title', COUNT(rental_date) AS 'rent_count'
FROM film, rental, inventory
WHERE film.film_id = inventory.film_id
AND inventory.inventory_id = rental.inventory_id
GROUP BY title
ORDER BY COUNT(rental_date) DESC;
```



movie_title	rent_count
BUCKET BROTHERHOOD	34
ROCKETEER MOTHER	33
FORWARD TEMPLE	32
SCALAWAG DUCK	32
GRIT CLOCKWORK	32

#7f. Write a query to display how much business, in dollars, each store brought in.

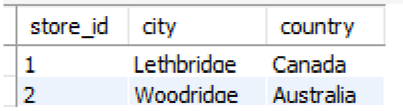
```
SELECT store.store_id AS 'store', SUM(amount) AS 'total_revenue'
FROM store, staff, payment
WHERE store.store_id = staff.store_id
AND staff.staff_id = payment.staff_id
GROUP BY store.store_id
ORDER BY SUM(amount) DESC;
```



store	total_revenue
2	33927.04
1	33489.47

#7g. Write a query to display for each store its store ID, city, and country.

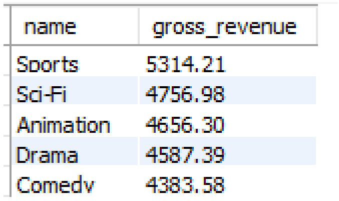
```
SELECT store_id, city, country
FROM store, address, city, country
WHERE store.address_id = address.address_id
AND address.city_id = city.city_id
AND city.country_id = country.country_id;
```



store_id	city	country
1	Lethbridge	Canada
2	Woodridge	Australia

#7h. List the top five genres in gross revenue in descending order. (Hint: you may need to use the following tables: category, film_category, inventory, payment, and rental.)

```
SELECT name, SUM(amount) AS 'gross_revenue'
FROM category, film_category, inventory, rental, payment
WHERE category.category_id = film_category.category_id
AND film_category.film_id = inventory.film_id
AND inventory.inventory_id = rental.inventory_id
AND rental.rental_id = payment.rental_id
GROUP BY name
ORDER BY gross_revenue DESC
LIMIT 5;
```



name	gross_revenue
Sports	5314.21
Sci-Fi	4756.98
Animation	4656.30
Drama	4587.39
Comedy	4383.58

#8a. In your new role as an executive, you would like to have an easy way of viewing the Top five genres by gross revenue. Use the solution from the problem above to create a view. If you haven't solved 7h, you can substitute another query to create a view.
#DROP VIEW IF EXISTS top_five_genres;

```
CREATE VIEW top_five_genres AS

        SELECT name, SUM(amount) AS 'gross_revenue'
        FROM category, film_category, inventory, rental, payment
        WHERE category.category_id = film_category.category_id
        AND film_category.film_id = inventory.film_id
        AND inventory.inventory_id = rental.inventory_id
        AND rental.rental_id = payment.rental_id
        GROUP BY name
        ORDER BY gross_revenue DESC
        LIMIT 5;
```

#8b. How would you display the view that you created in 8a?

```
SELECT * FROM top_five_genres;
```

#8c. You find that you no longer need the view top_five_genres. Write a query to delete it.

```
DROP VIEW top_five_genres;
```