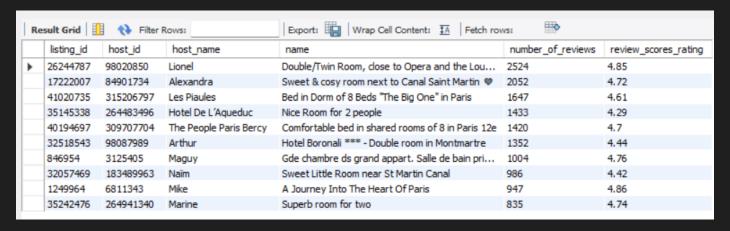
Exploring Airbnb Insights through SQL Analysis and Word Clouds for Paris city

1. Top 10 listings with the highest number of reviews and their average review ratings, along with the host details.

```
SELECT listing_id, host_id, host_name, name, number_of_reviews,
review_scores_rating
FROM listings
ORDER BY number_of_reviews DESC, review_scores_rating DESC
LIMIT 10;
```



2. Count of listings by room type, along with the average price and average review rating for each room type.



3. Top 20 listings of type 'Entire home/apt' sorted by the number of reviews and review ratings.

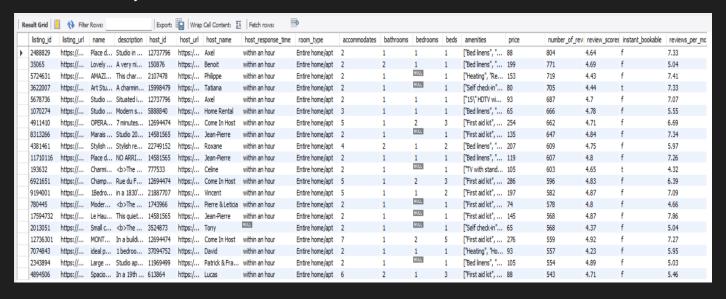
SELECT *

FROM listings

WHERE room_type = 'Entire home/apt'

ORDER BY number_of_reviews DESC, review_scores_rating DESC

LIMIT 20;



4. Find hosts with the highest number of listings.

SELECT host_id, host_name, COUNT(listing_id) AS total_listings

FROM listings

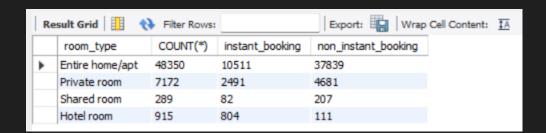
GROUP BY host_id, host_name

ORDER BY total listings DESC;



5. Count the number of listings by room type, along with the count of instant booking and non-instant booking listings.

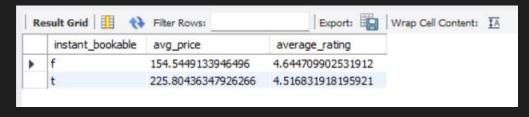
```
SELECT room_type, COUNT(*),
COUNT(CASE WHEN instant_bookable = 't' THEN 1 END) AS instant_booking,
COUNT(CASE WHEN instant_bookable = 'f' THEN 1 END) AS non_instant_booking
FROM listings
```



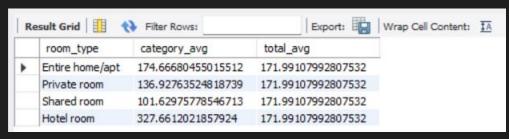
GROUP BY room type;

6. Calculate the average price and average review rating for listings with different instant booking options.

```
SELECT instant_bookable,
        AVG(price) AS avg_price,
        AVG(review_scores_rating) AS average_rating
FROM listings
GROUP BY instant bookable;
```



7. Determine the average price for each room type and the overall average price.



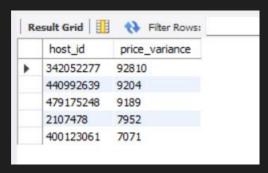
8. Identify hosts with the highest price variance across their listings.

SELECT host_id, MAX(price) - MIN(price) AS price_variance
FROM listings

GROUP BY host_id

ORDER BY price_variance DESC

LIMIT 5;



9. Calculate the average price per bedroom for listings in Paris.

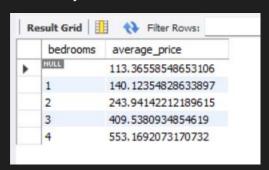
SELECT bedrooms, **AVG**(price) **AS** average_price

FROM listings

GROUP BY bedrooms

ORDER BY bedrooms

LIMIT 5;

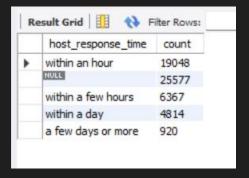


10. Analyse the count of listings based on host response time.

SELECT host_response_time, COUNT(*) AS count

FROM listings

GROUP BY host_response_time;



11. Determine the total count and percentage of instant booking listings.

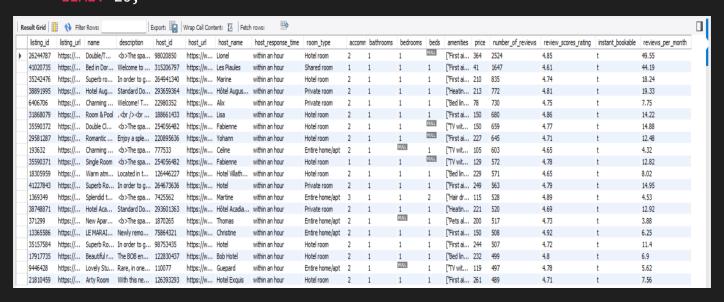
12. Retrieve the top 20 listings with instant booking and high review ratings, sorted by the number of reviews.

24.4826

56726

13888

SELECT *
FROM listings
WHERE instant_bookable = 't' AND review_scores_rating >= 4.5
ORDER BY number_of_reviews DESC
LIMIT 20;



13. Retrieve the top 20 listings with low prices and high review ratings.

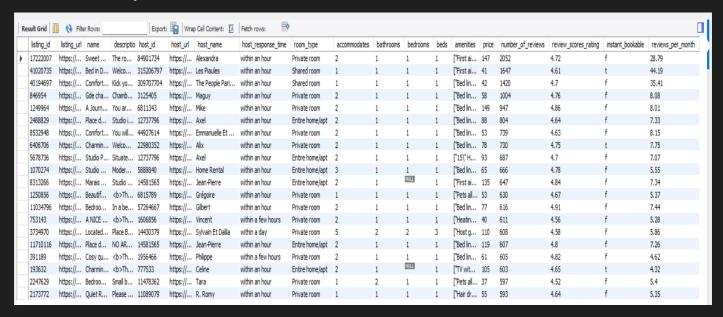
SELECT *

FROM listings

WHERE price < 150 AND review scores rating >= 4.5

ORDER BY number of reviews DESC

LIMIT 20;



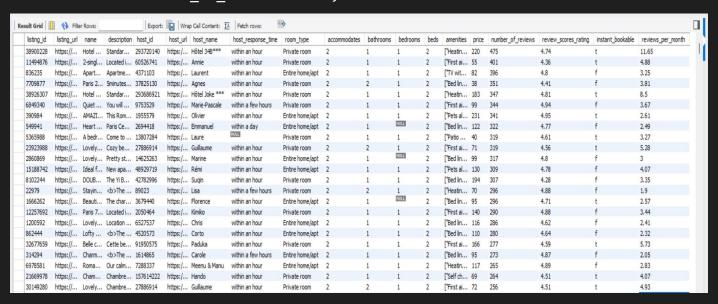
14. Find listings that accommodate 2 people and have at least 2 beds.

SELECT *

FROM listings

WHERE accommodates = 2 AND beds >= 2

ORDER BY number of reviews DESC;



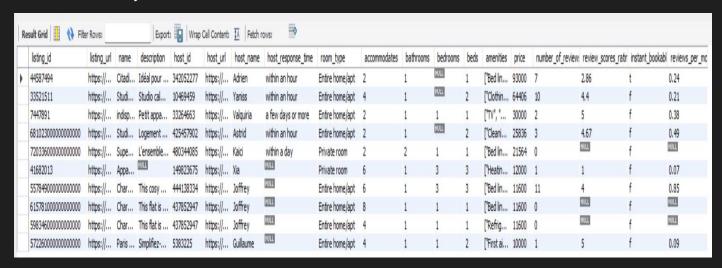
15. Retrieve the top 10 listings with the highest prices.

SELECT *

FROM listings

ORDER BY price DESC

LIMIT 10;



16. Retrieve the 10 listings with the lowest prices, excluding zero prices.

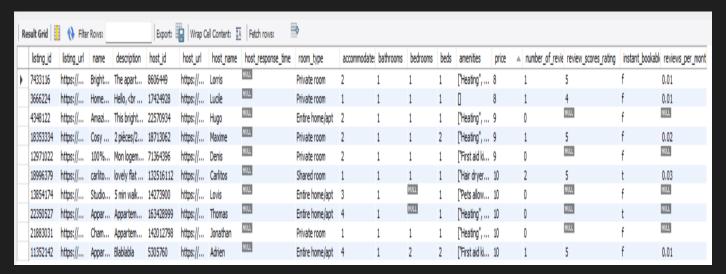
SELECT *

FROM listings

WHERE price != 0

ORDER BY price ASC

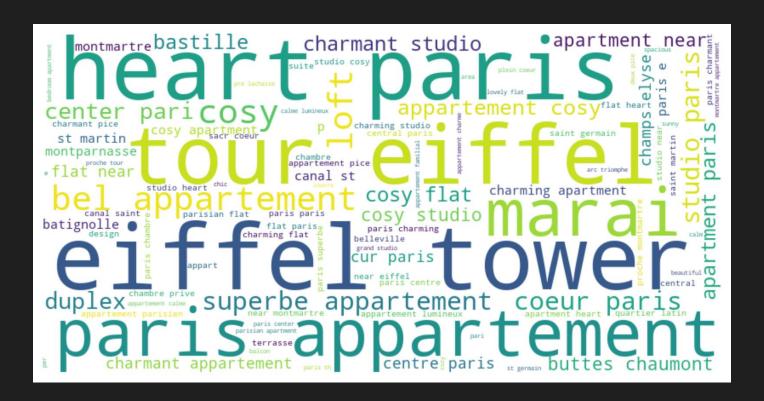
LIMIT 10;



Name column WordCloud

SELECT listing_id, name FROM listings;

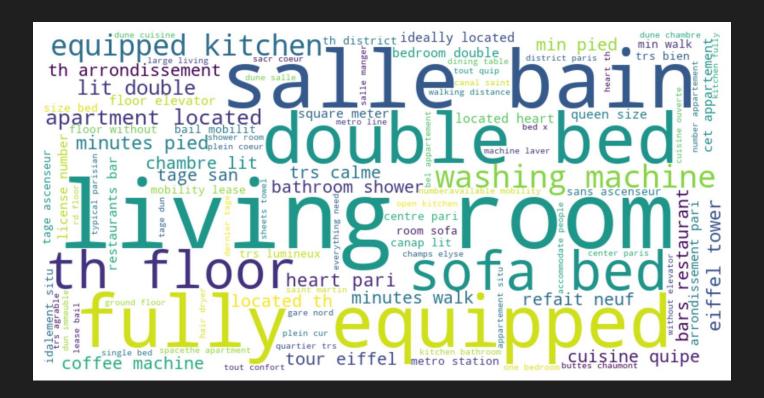
Re	Result Grid 11						
	listing_id	name					
•	5396	Explore the heart of old Paris					
	7397	MARAIS - 2ROOMS APT - 2/4 PEOPLE					
	7964	Sunny apartment with balcony					
	9359	Cozy, Central Paris: WALK or VELIB EVERYWHERE!					
	9952	Paris petit coin douillet					
	10586	Studio 7 Montmartre					
	10588	Studio 10 Montmartre					
	11265	Elegant appartment in Montmartre					
	11487	Heart of Paris, brand new aparment.					
	81870	Saint Germain Musee d'orsay					
	11798	Loft very charming in Paris					
	84820	Bird's nest in Montmartre: Sun/view all over Paris					
	247764	appartment next to canal st martin					
	12268	Faubourg Saint Antoine-chambrecalme					
	248869	Loft Baron					
	12452	Voltaire Charm					
	250378	Kids Welcome Apartment "Le Marais"					
	252049	Grand appartement, 2 chambres, 2 salles de bain					
	252095	2-room apt Buttes-Chaumont 436 P ²					
	86053	Charmful flat facing a gothic church					
	12887	Bedroom & Terrace, Heart of Paris					
	87481	ST Germain 1 bed High ceiling ,AC and LIFT					
	90790	ROMANTIC STUDIO/APT MARAIS/PICASSO					
	91139	Romantic Flat on mews, 1 Bedrm					
	252525	charming bedroom near metro OPERA					
	253877	Montmartre Moulin Rouge Constance					
	256643	Lovely apt, rue Oberkampf Paris 11					



Description column WordCloud

SELECT listing_id, description FROM listings;

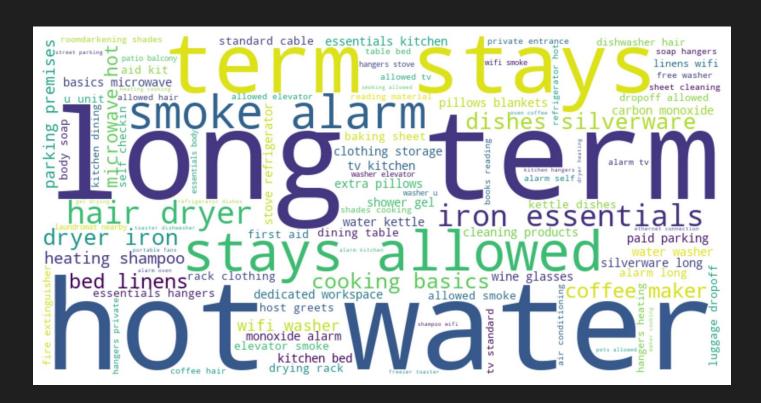
	listing_id	description					
•	5396	Cozy, well-appointed and graciously designed studio apartment that mixes old and new aesthetics at the very					
	7397	VERY CONVENIENT, WITH THE BEST LOCATION ! > The space < /b > PLEASE ASK ME BEF					
	7964	We are renting our a spacious, sunny fully furnished apartment located on a pedestrian street in vibrant neigh					
	9359	Location! Location! Location! Just bring your toothbrush to this charmingly restored cheerful one bedroom in th					
	9952	Je suis une dame retraitée, qui propose un agréable petit appartement situé entre Bastille et République. /					
	10586	Furnished rental BAIL MOBILITE All Mobilities All Mobiliti					
	10588	Furnished rental BAIL MOBILITE All Mobilite All Mo					
	11265	Located in lively and charming Montmartre, in a the typically parisian building with elevator, this perfectly secur					
	11487	Very confortable and bright studio. The door is armored, each space is well defined, sleep, living room, kitche					
	81870	 b>The space This beautiful apartment with polished wood floors is perfectly located. for th					
	11798	Mon appartement est situé dans une très jolie cour à l'écart de la rue. Il est lumineux et spacieux. Grâce à la lig					
	84820	Apartment, two rooms, very calm and sunny. Apartment, two rooms, very calm and sunny. Apartment, two rooms,					
	247764	 b>The space charming appartment of 51 m² on the 5th floor. in front of Gare de l'Est. Saint Marti					
	12268	The space Chambre très daire, calme, sur le jardin dans un appartement tranquille et lumineux					
	248869	Le Loft baron est un appartement daire et calme. Vous pourrez y séjourner jusqu'à 4 personnes. Posez vos val					
	12452	You will spend a pleasant stay in this bright and spacious apartment located near Place de la Bastille in Paris. E					
	250378	 b>The space NEW! The lounge and the bathroom have just been repainted. Apartment o					
	252049	Très bel appartement de 85 m2, spacieux, lumineux, confortable, avec poutres apparentes. Les deux chambr					
	252095	Newly refurnished, the apartment is located near the (beautiful) Buttes-Chaumont park. Composed of two ind					
	86053	Amazing apartment totally renovated facing one of the most ancient Gothic cathedrals in the world, preciously					
	12887	Welcome to Paradise ! < br />Central Paris with Eiffel Tower view: < br />- Very nice furnished clear room in a t					
	87481	This one-bedroom apartment in Paris is located in the heart of Saint Germain des Pres bordering the Seine Rive					
	90790	This studio is thoroughly cleaned and sanitized but you have to wear a mask in the building. It is perfectly situa					
	91139	In Parisian Paris, a sunny well-renovated tastefully and very-completely furnished self-service independent fla					
	252525	Nice and sunny bedroom in a duplex appartemnent in center of Paris, very close to Opera Garnier, Palais Royal					
	253877	The space Charming studio to rent in a lovely historical district of Montmartre/ Moulin-Rouge, li					
	256643	Our cool and cosy apartment has a true Parisian feeling! It perfectly fits two and is centrally located, just a fe					



Amenities column WordCloud

SELECT listing_id, amenities FROM listings;

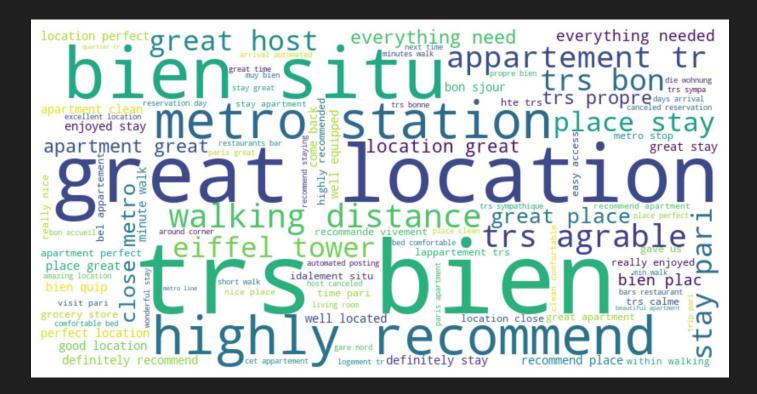
	listing_id	amenities				
	5396	["Bed linens", "Heating", "Shower gel", "Host greets you", "Refrigerator", "Fire extinguisher", "Extra pillows and blank				
	7397	["Bed linens", "Hangers", "Cooking basics", "Coffee maker", "Iron", "Wifi", "Stove", "Host greets you", "Refrigerator",				
	7964	["Bed linens", "Changing table", "Heating", "Private patio or balcony", "Refrigerator", "Extra pillows and blankets", "Ho				
9	9359	["Heating", "Dedicated workspace", "Elevator", "Essentials", "Hair dryer", "Kitchen", "Wifi"]				
9	9952	["First aid kit", "Bed linens", "Heating", "Shower gel", "Host greets you", "Refrigerator", "Extra pillows and blankets", "				
	10586	["TV with standard cable", "Heating", "Elevator", "Washer", "Cooking basics", "Refrigerator", "Microwave", "Coffee m				
	10588	["Heating", "Washer", "TV with standard cable", "Smoke alarm", "Kitchen", "Wifi"]				
	11265	["Bed linens", "Heating", "Refrigerator", "Fire extinguisher", "Extra pillows and blankets", "Hot water", "Dedicated wor				
	11487	["Bed linens", "Heating", "21\" HDTV with standard cable", "Host greets you", "Refrigerator", "Extra pillows and blanke				
8	81870	["Heating", "Host greets you", "Refrigerator", "Hot water", "Washer", "Cooking basics", "Microwave", "Essentials", "C				
	11798	["Bed linens", "Heating", "Shower gel", "Host greets you", "Refrigerator", "Extra pillows and blankets", "Hot water", "				
1	84820	["Bed linens", "Heating", "Shower gel", "Host greets you", "Refrigerator", "Hot water", "Cleaning products", "Cooking				
1	247764	["Bed linens", "Heating", "Host greets you", "Refrigerator", "Hot water", "Washer", "Cooking basics", "Microwave", "E				
	12268	["Heating", "TV", "Washer", "Elevator", "Breakfast", "Dryer", "Kitchen", "Wifi"]				
	248869	["Bed linens", "Heating", "Refrigerator", "Hot water kettle", "Dining table", "Hot water", "Cleaning products", "Clothing				
3	12452	["Bed linens", "Heating", "Refrigerator", "Hot water kettle", "Dedicated workspace", "Washer", "Cooking basics", "Micr				
4	250378	["Bed linens", "Changing table", "Heating", "Host greets you", "Refrigerator", "Hot water", "Children\u2019s books an				
	252049	["First aid kit", "Bed linens", "Heating", "Refrigerator", "Extra pillows and blankets", "Hot water", "Washer", "Cooking b				
	252095	["Pets allowed", "Bed linens", "Heating", "Extra pillows and blankets", "Hot water", "Washer", "Cooking basics", "Pocke				
1	86053	["First aid kit", "Bed linens", "Heating", "Shower gel", "Wifi \u2013 29 Mbps", "Breakfast", "Lockbox", "Extra pillows an				
	12887	["First aid kit", "Bed linens", "Heating", "Park view", "Shower gel", "Host greets you", "Refrigerator", "Fire extinguisher				
1	87481	["Bed linens", "Heating", "Refrigerator", "Fire extinguisher", "Hot water", "Dedicated workspace", "Air conditioning", "				
9	90790	["Bed linens", "Heating", "Shower gel", "Refrigerator", "Breakfast", "Hot water kettle", "Conditioner", "Hot water", "De				
	91139	["First aid kit", "Bed linens", "Heating", "Host greets you", "Refrigerator", "Extra pillows and blankets", "Hot water", "A				
	252525	["Clothing storage", "Bed linens", "Heating", "Fast wifi \u2013 442 Mbps", "Shower gel", "Host greets you", "Refrigera				
	253877	["Heating", "Hangers", "Refrigerator", "Coffee maker", "Essentials", "Kitchen", "Dishes and silverware", "Hair dryer", "				
	256643	["TV with standard cable", "Heating", "Washer", "Hangers", "Long term stays allowed", "Host greets you", "Essentials"				



Reviews WordCloud

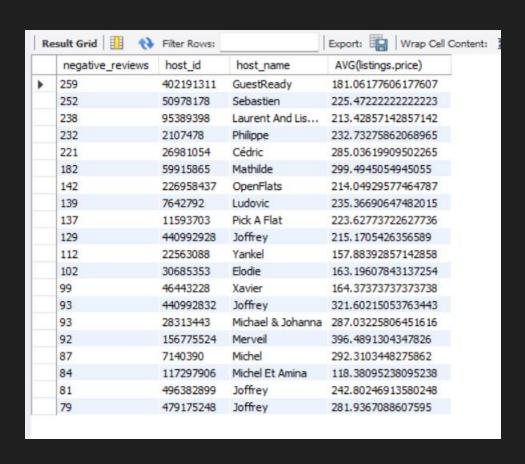
SELECT listing_id, comments FROM reviews;

	listing_id	comments					
•	5396	Perfect location!! Nasrine was a delight and made the whole process very easy. We also had a p					
	5396	This is a nice place in a great location in Paris, and the woman helping the owner was very kind to					
	5396	Nice studio, very clean, very quiet, in a great neighbourhood. Close to everything and very safe					
	5396	Superb location, great studio. A slice of Paris that is the real thing. Wonderful host					
	5396	Perfect place to be in Paris, walking home every night past Notre Dame and across the river thro					
	5396	Wonderful hosts - very accommodating, friendly and responsive. The apartment was perfectly si					
	5396	Best location in Paris - very privy location and walking distance to everything! The apartment is s					
	5396	Just a short walk from several Metro stations, Notre Dame, Hotel de Ville, left bank, thus central					
	5396	I can not imagine a better location to stay in Paris. And the value of this apartment is outstandin					
	5396	I always stay on the Ile Saint Louis when I am in Paris (where I spend 4-6 weeks per year every					
	5396	Great studio in a perfect location. In the very center of old Paris and all things but very quiet. Ve					
	5396	Air b & b review Clean, cozy, good location, accommodating and helpful hosts, well s					
	5396	Fantastic location, quiet, clean, great place for 2 people. Host is responsive to questions in a tim					
	5396	If you will be out all day sight-seeing in Paris, then this apartment can be a fine rental. It's re-fini					
	5396	My boyfriend and I stayed here last May. This location is hard to beat. Perfect location - We onl					
	5396	Cozy apartment in a great location! I would definitely stay here again the next time I'm in Paris.					
	5396	A wonderful experience! The studio was exactly as the pictures described, we were met on time					
	5396	As virtually all the reviews note, the apartment is in a great location, clean and quiet. Highly rec					
	5396	Amazing in every way! (Location, amenities, host, etc) I loved walking home every day down					
	5396	I had a great stay in Borzou's apartment; the location was such that I used the Metro much less t					
	5396	Perfect studio in a prefect location! >It was so quiet, which was important for me to be able					
	5396	An amazing studio with everything you need, wonderful location and very private, quiet and clea					
	5396	I had a peaceful 3-week stay in Borzou's cozy studio. Compared to other studio apartments I've					
	5396	I stayed at Borzou's flat for 10 days in March and couldn't have asked for a thing. All was perfect					
	5396	I visit Paris for a few weeks each year, and I typically stay in this neighborhood because it is suc					
	5396	We had a really great time at Borzou's apartment. Everything worked very well. The location is s					
	5396	This was my second stay at Borzou's apartment. It's the perfect spot right in the heart of the cit					



Res	sult Grid 🔢 🙌	Filter Rows:		Export: Wrap Cell	Content:
	positive_reviews	host_id	host_name	AVG(listings.price)	
•	2690	402191311	GuestReady	186.25315985130112	
	2569	95389398	Laurent And Lis	220.08330089529	
	2099	59915865	Mathilde	313.2429728442115	
	2082	50978178	Sebastien	227.83045148895292	
	1999	2107478	Philippe	260.37168584292147	
	1860	68254005	Élise & Sébastien	493.3258064516129	
	1695	26981054	Cédric	295.5362831858407	
	1588	46443228	Xavier	170.2374055415617	
	1541	14581565	Jean-Pierre	137.43478260869566	
	1484	30685353	Elodie	163.98517520215634	
	1474	9304128	Louise	384.9457259158752	
	1324	22563088	Yankel	155.75075528700907	
	1315	156775524	Merveil	402.23117870722433	
	1257	21271697	Angie & Chris A	160.54415274463008	
	1230	12694474	Come In Host	265.3349593495935	
	1203	7642792	Ludovic	278.1737323358271	
	1203	7140390	Michel	301.546965918537	
	1154	12136845	Alexandre	361.8457538994801	
	1144	28313443	Michael & Johanna	290.5638111888112	
	1118	2526137	Gilian	223.71198568872987	

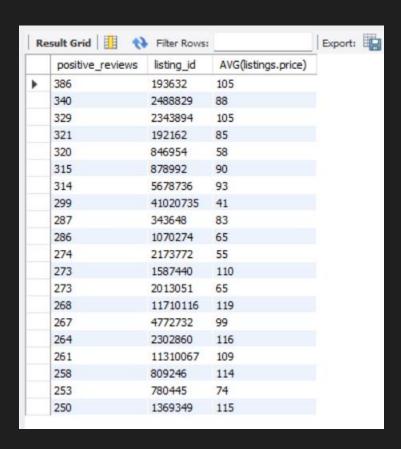
LIMIT 20;



LIMIT 20;

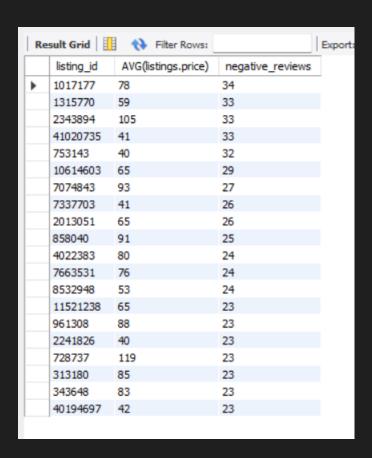
19. Count positive reviews and calculate average price for listings with a maximum price of \$120.

```
SELECT COUNT(*) AS positive_reviews, reviews.listing_id,
    AVG(listings.price)
FROM reviews INNER JOIN listings ON
    listings.listing_id = reviews.listing_id
WHERE LOWER(reviews.comments) REGEXP '(great|perfect|trs bien|highly
    recommend|bien situ|fantastic|incredible)'
    AND listings.price < 120
GROUP BY reviews.listing_id
ORDER BY positive_reviews DESC
LIMIT 20;</pre>
```



20. Count negative reviews and calculate average price for listings with a maximum price of \$120.

```
SELECT reviews.listing_id, AVG(listings.price),
    SUM(CASE WHEN LOWER(comments) REGEXP '(dirty|bad|problem)' THEN 1
        ELSE 0 END) AS negative_reviews
FROM reviews INNER JOIN listings ON
        listings.listing_id = reviews.listing_id
WHERE listings.price < 120
GROUP BY reviews.listing_id
ORDER BY negative_reviews DESC
LIMIT 20;</pre>
```



21. Find listings with specific amenities, high review ratings, and prices below \$150.

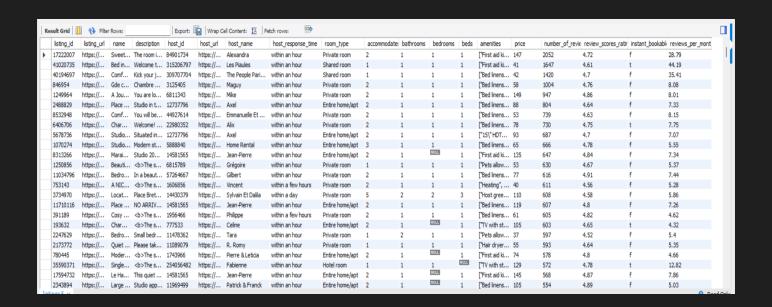
```
FROM listings

WHERE LOWER(amenities) REGEXP '(hot water|kitchen|wifi)'

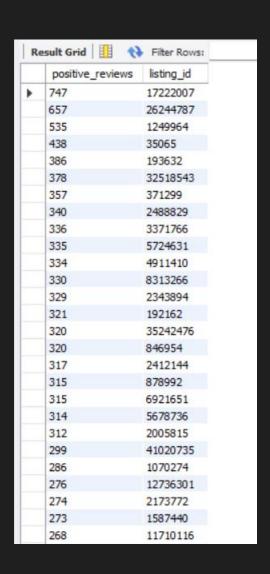
AND review_scores_rating >= 4.5

AND price < 150

ORDER BY number_of_reviews DESC;
```



22. Count positive reviews for listings with specific amenities (wifi and hot water).

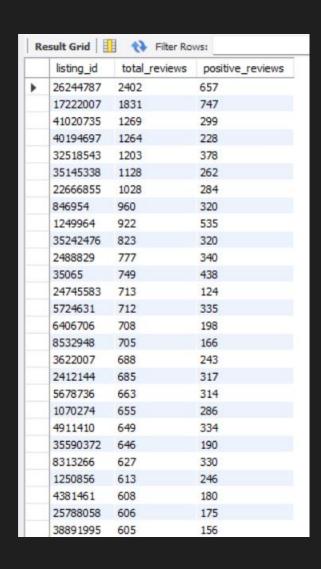


23. Count total reviews and positive reviews for each listing.
SELECT listing_id,
COUNT(*) AS total_reviews,
SUM(CASE WHEN LOWER(comments) REGEXP '(great|perfect|trs bien|highly recommend|bien situ|fantastic|incredible)' THEN 1 ELSE 0 END)
AS positive_reviews

FROM reviews

GROUP BY listing_id

ORDER BY total_reviews DESC;



24. Retrieve listings with specific criteria, including room type, price, beds, instant booking, and positive reviews.

