SWIGGY SQL AD-HOC ANALYSIS

Title: Restaurants Analysis for Swiggy

1. Project Overview

This project leverages SQL to perform ad-hoc analysis on Swiggy's restaurant and menu dataset to identify patterns in as top-rated restaurants, popular cuisines, pricing patterns, and operational trends across cities. Insights from the analysis will support promotional strategies and improve customer experience on platform.

2. Objectives

Objective is to seek the answers of below questions:

1. How many restaurants have a rating greater than 4.5?
2. Which is the top 1 city with the highest number of restaurants?
3. How many restaurants have the word "PIZZA" in their name?
4. What is the most common cuisine among the restaurants in the dataset?
5. What is the average rating of restaurants in each city?
6. What is the highest price of item under the 'Recommended' menu category for each restaurant?
7. Find the top 5 most expensive restaurants that offer cuisine other than Indian cuisine.
8. Find the restaurants that have an average cost which is higher than the total average cost of all restaurants together?
9. Retrieve the details of restaurants that have the same name but are located in different cities.
10. Which restaurant offers the most number of items in the 'Main Course' category?
11. List the names of restaurants that are 100% vegetarian in alphabetical order of restaurant name?
12. Which is the restaurant providing the lowest average price for all items?
13. Which top 5 restaurant offers highest number of categories?
14. Which restaurant provides the highest percentage of non-vegetarian food?

3. Dataset Overview

Source: GitHub
Key Tables: There is only one table `Swiggy.csv`
Columns: `restaurant_no, restaurant_name, city, address, rating, cost_per_person, cuisine, restaurant_link, menu_category, item, price, veg_or_non-veg`

4. Analysis

1. How many restaurants have a rating greater than 4.5?

```
SELECT COUNT(*) AS number_of_restaurants
    FROM swiggydb
    WHERE RATING>4.5
```

Output:

	number_of_restaurants
▶	1573

2. Which is the top 1 city with the highest number of restaurants?

```
SELECT city AS city_name,
COUNT(*) AS count
FROM swiggydb
GROUP BY city
ORDER BY count DESC
LIMIT 1
```

Output:

	city_name	count
▶	Bangalore	34552

3. How many restaurants have the word "pizza" in their name?

```
SELECT COUNT(*) AS total_pizza_restaurants
FROM swiggydb
WHERE restaurant_name LIKE '%Pizza%'
```

Output:

	total_pizza_restaurants
▶	2218

4. What is the most common cuisine among the restaurants in the dataset?

```
SELECT cuisine AS name_of_cuisine
FROM swiggydb
GROUP BY cuisine
ORDER BY COUNT(*) DESC
LIMIT 1
```

Output:

	name_of_cuisine
▶	North Indian,Chinese

5. **What is the average rating of restaurants in each city?**

```
SELECT city AS name_of_city,
    ROUND(AVG(rating),2) AS avg_rating
    FROM swiggydb
    GROUP BY city
```

Output:

	name_of_city	avg_rating
▶	Bangalore	4.12
	Ahmedabad	4.07

6. **What is the highest price of item under the 'recommended' menu category for each restaurant?**

```
SELECT DISTINCT
    restaurant_name AS name_of_restaurant,
    MAX(PRICE) OVER(PARTITION BY restaurant_name) AS max_price
    FROM swiggydb
    WHERE menu_category = 'RECOMMENDED'
```

(OR)

```
SELECT
    restaurant_name AS name_of_restaurant,
    MAX(price) AS max_price
FROM swiggydb
WHERE menu_category = 'RECOMMENDED'
GROUP BY restaurant_name;
```

Output:

name_of_restaurant	max_price
A2B Veg	145
Aalishan Restaurant & Caterer	395
Ab Chai Pe Charcha	199
Amazing Hydrabadi Dum Biryani	660
Amdos Kitchen	145
Anand Sweets and Savouries	190
Angat 22 - The Restaurant & Banquet	315

7. **Find the top 5 most expensive restaurants that offer cuisine other than indian cuisine.**

```
SELECT DISTINCT restaurant_name AS name_of_restaurant, price
FROM swiggydb
WHERE cuisine <> 'indian'
ORDER BY price DESC
LIMIT 5
```

Output:

name_of_restaurant	price
Cakes N Bakes	9990
The Chocolate Room	4999
The Chocolate Room	4499
Anjappar	4049
SMOOR	3733

8. **Find the restaurants that have an average cost which is higher than the total average cost of all restaurants together.**

```
SELECT restaurant_name, cost_per_person
    FROM swiggydb
    GROUP BY restaurant_name, cost_per_person
    HAVING cost_per_person> (SELECT AVG(cost_per_person) FROM swiggydb)
```

Output:

restaurant_name	cost_per_person
Anjappar	600
Truffles	450
Via Milano	800
Meghana Foods	500
Anupam's Coast II Coast	1000
Mani's Dum Biryani	400
Parika	1000

9. **Retrieve the details of restaurants that have the same name but are located in different cities.**

```
SELECT DISTINCT s2.restaurant_name as restaurant_name
    FROM swiggydb AS s1
    JOIN swiggydb AS s2
    ON s1.restaurant_name = s2.restaurant_name
    and s1.city<>s2.city
```

10. Which restaurant offers the most number of items in the 'main course'category

```
SELECT restaurant_name,
COUNT(menu_category) AS number_of_items
FROM swiggydb
WHERE menu_category = 'MAIN COURSE'
GROUP BY restaurant_name
ORDER BY number_of_items DESC
LIMIT 1
```

Output:

	restaurant_name	number_of_items
▶	Spice Up	172

11. List the names of restaurants that are 100% vegeatarian in alphabetical order of restaurant name.

```
SELECT DISTINCT restaurant_name
FROM swiggydb
WHERE restaurant_no NOT IN
        (SELECT DISTINCT restaurant_no
        FROM swiggydb
        WHERE `veg_or_non-veg` = 'NON-VEG')
ORDER BY restaurant_name
```

12. Which is the restaurant providing the lowest average price for all items?

```
SELECT restaurant_name,AVG(price) AS avg_price
FROM swiggydb
GROUP BY restaurant_name
ORDER BY avg_price ASC
LIMIT 1
```

Output:

	restaurant_name	avg_price
▶	Urban Kitli	62.1705

13. Which top 5 restaurant offers highest number of categories?

```
SELECT
    restaurant_name,
    COUNT(menu_category) AS total_categories
FROM swiggydb
GROUP BY restaurant_name
ORDER BY total_categories DESC
LIMIT 5
```

Output:

	restaurant_name	total_categories
▶	Oven Story Pizza	948
	Subway	817
	Faasos - Wraps & Rolls	756
	McDonald's	738
	Behrouz Biryani	733

14. Which restaurant provides the highest percentage of non-vegeatarian food?

```
SELECT
    restaurant_name, COUNT(`veg_or_non-veg`) AS total
FROM swiggydb
WHERE `veg_or_non-veg` = 'non-veg'
GROUP BY restaurant_name
ORDER BY total DESC
LIMIT 1
```

Output:

	restaurant_name	total
▶	Behrouz Biryani	443

5. CONCLUSION

The ad-hoc SQL analysis of Swiggy's restaurant and menu dataset provided critical insights into operational and customer trends. From finding the top-rated restaurants to popular cuisines and pricing patterns analysis highlights key areas for strategic improvements. These findings can drive better business decisions, improve customer satisfaction, and optimize Swiggy's overall service delivery.