# SQL PROJECT

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# Swiggy


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# SQL Project - Swiggy

## Introduction

A Swiggy SQL project is typically a data analysis case study where you work with a food delivery dataset to answer real-world business questions—like customer behavior, order trends, and revenue drivers. It helps you practice **joins**, **aggregations**, **subqueries**, and **window functions** while simulating how analysts support decision-making in companies like Swiggy.

## Dataset Information

The dataset includes information on various restaurants, their locations, cuisines, menus, and more. It is provided in a structured format within the swiggy.csv file with around **50,000** rows of data. The schema of the dataset is as follows:

- restaurant_no: Unique identifier for each restaurant.
- restaurant_name: Name of the restaurant.
- city: City where the restaurant is located.
- address: Address of the restaurant.
- rating: Rating of the restaurant.
- cost_per_person: Cost per person for dining at the restaurant.
- cuisine: Cuisine offered by the restaurant.
- restaurant_link: Link to the restaurant on Swiggy.
- menu_category: Category of items on the menu.
- item: Name of the menu item.
- price: Price of the menu item.
- veg_or_nonveg: Indicates whether the item is vegetarian or non-vegetarian.

## Project Overview:

- Identifying top-rated restaurants.
- Identifying top city with maximum no. of restaurants.
- Analyzing popular cuisines in different cities.
- Exploring menu categories and items.
- Assessing the cost per person for dining in different places.

## Questions:

## # Basic Level

1. How many restaurants have a rating greater than 4.5?
2. Which city has 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-priced item under the "Recommended" menu category for each restaurant?
7. Find the top 5 most expensive restaurants that offer cuisines other than Indian.
8. Which restaurant provides the lowest average price for all items?

## # Intermediate Level

1. Which restaurant offers the most items in the "Main Course" category?
2. Find the restaurants whose average cost is higher than the overall average cost of all restaurants.
3. Retrieve the details of restaurants that share the same name but are located in different cities.
4. Which top 5 restaurants offer the highest number of categories?

## # Advanced Level

1. List the names of restaurants that are 100% vegetarian, ordered alphabetically.
2. Which restaurant provides the highest percentage of non-vegetarian food?
3. Determine the most expensive and least expensive cities for dining.
4. Calculate the rating rank for each restaurant within its city, where rank = 1.

**Solution:**

**-- Create Database**

```
CREATE DATABASE swiggy_db;;
```

**-- Switch to the database**

```
USE swiggy_db;
```

**-- Create Tables**

```
CREATE TABLE swiggy(
restaurant_no INTEGER NOT NULL,
restaurant_name VARCHAR(50) NOT NULL,
city VARCHAR(10) NOT NULL,
address VARCHAR(250),
rating DECIMAL(3,1) NOT NULL,
cost_per_person INTEGER ,
cuisine VARCHAR(50) NOT NULL,
restaurant_link VARCHAR(150) NOT NULL,
menu_category VARCHAR(100),
item VARCHAR(200),
price VARCHAR(15) NOT NULL,
veg_or_nonveg VARCHAR(10)
);
```

**-- View Tables**

```
SELECT * FROM swiggy;
```

**-- Import Data**

```
-- Import Data into swiggy Table
```

**# Basic level:**

**-- 01 How many restaurants have a rating greater than 4.5?**

```
SELECT COUNT(DISTINCT restaurant_no) AS high_rated_restaurants
FROM swiggy
WHERE rating > 4.5;
```

**-- 02 Which city has the highest number of restaurants?**

```
SELECT city, COUNT(DISTINCT restaurant_name) AS restaurant_count
FROM swiggy
GROUP BY city
ORDER BY restaurant_count DESC
LIMIT 1;
```

**-- 03 How many restaurants have the word "pizza" in their name?**

```
SELECT COUNT(DISTINCT restaurant_name) AS pizza_restaurants
FROM swiggy
WHERE restaurant_name LIKE '%pizza%';
```

**-- 04 What is the most common cuisine among the restaurants?**

```
SELECT cuisine, COUNT(cuisine) AS cuisine_count
FROM swiggy
GROUP BY cuisine
ORDER BY cuisine_count DESC
LIMIT 1;
```

**-- 05 What is the average rating of restaurants in each city?**

```
SELECT city, AVG(rating) AS average_rating
FROM swiggy
GROUP BY city;
```

**-- 06 What is the highest-priced item under the 'recommended' menu category for each restaurant?**

```
SELECT restaurant_name, MAX(price) AS highest_price
FROM swiggy
WHERE menu_category = 'recommended'
GROUP BY restaurant_name;
```

**-- 07 Find the top 5 most expensive restaurants that offer cuisines other than Indian?**

```
SELECT distinct restaurant_name, cost_per_person
FROM swiggy
WHERE cuisine <> 'Indian'
ORDER BY cost_per_person DESC
LIMIT 5;
```

**-- 08 Which restaurant provides the lowest average price for all items?**

```
SELECT restaurant_name, AVG(cost_per_person) AS avg_price
FROM swiggy
GROUP BY restaurant_name
ORDER BY avg_price
LIMIT 1;
```

**# Intermediate level:**

**-- 01 Which restaurant offers the most items in the 'main course' category?**

```
SELECT restaurant_name, COUNT(item) AS no_of_items
FROM swiggy
WHERE menu_category = 'Main Course'
GROUP BY restaurant_name
ORDER BY no_of_items DESC
LIMIT 1;
```

**-- 02 Find restaurants whose average cost is higher than the overall average cost?**

```
SELECT Distinct restaurant_name, cost_per_person
FROM swiggy
WHERE cost_per_person > (SELECT AVG(cost_per_person) FROM swiggy);
```

**-- 03 Retrieve details of restaurants with the same name but located in different cities?**

```
SELECT distinct t1.restaurant_name, t1.city, t2.city
FROM swiggy AS t1
JOIN swiggy AS t2
  ON t1.restaurant_name = t2.restaurant_name
 AND t1.city <> t2.city;
```

**-- 04 Which top 5 restaurants offer the highest number of categories?**

```
SELECT restaurant_name, COUNT(DISTINCT menu_category) AS no_of_categories
FROM swiggy
GROUP BY restaurant_name
ORDER BY no_of_categories DESC
LIMIT 5;
```

**# Advance level:**

**-- 01 List restaurants that are 100% vegetarian, ordered alphabetically?**

```
SELECT restaurant_name,
      (COUNT(CASE WHEN veg_or_nonveg = 'Veg' THEN 1 END) * 100 / COUNT(*))
AS vegetarian_percentage
FROM swiggy
GROUP BY restaurant_name
HAVING vegetarian_percentage = 100
ORDER BY restaurant_name;
```

**-- 02 Which restaurant provides the highest percentage of non-vegetarian food?**

```
SELECT restaurant_name,
      (COUNT(CASE WHEN veg_or_nonveg = 'Non-veg' THEN 1 END) * 100 /
COUNT(*)) AS nonvegetarian_percentage
FROM swiggy
GROUP BY restaurant_name
ORDER BY nonvegetarian_percentage DESC
LIMIT 1;
```

**-- 03 Determine the most expensive and least expensive cities for dining?**

```
WITH city_expense AS (
   SELECT city,
         MAX(cost_per_person) AS max_cost,
         MIN(cost_per_person) AS min_cost
   FROM swiggy
   GROUP BY city
)
SELECT city, max_cost, min_cost
FROM city_expense
ORDER BY max_cost DESC;
```

**-- 04 Calculate the rating rank for each restaurant within its city (rank = 1)?**

```
WITH rating_rank_by_city AS (
   SELECT restaurant_name, city, rating,
         DENSE_RANK() OVER (PARTITION BY city ORDER BY rating DESC) AS
rating_rank
   FROM swiggy
)
SELECT restaurant_name, city, rating, rating_rank
FROM rating_rank_by_city
WHERE rating_rank = 1;
```

👋 **Congrats on completing the Complete SQL Project! You've leveled up your data skills—now go use them to build, analyze, and create amazing things. Keep learning, keep coding, and keep shining!**


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