# Day 31 – Advanced SQL Interview Challenge

This challenge is designed to simulate a real-world hiring test for a Data Analyst/SQL Developer role. It contains realistic datasets, business-oriented questions, and multi-step queries that require analytical thinking.

## Dataset: Online Food Delivery Platform

Restaurants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| RestaurantID | RestaurantName | City | JoinDate | Rating |
| 1 | SpiceHub | Delhi | 2020-03-15 | 4.5 |
| 2 | UrbanEats | Mumbai | 2019-11-10 | 4.2 |
| 3 | TandooriTales | Bangalore | 2021-01-05 | 4.8 |
| 4 | PizzaPalace | Pune | 2022-06-18 | 4.0 |

Customers

|  |  |  |  |
| --- | --- | --- | --- |
| CustomerID | CustomerName | City | JoinDate |
| 1 | Ravi Kumar | Delhi | 2021-02-15 |
| 2 | Simran Kaur | Mumbai | 2020-03-20 |
| 3 | John Smith | Bangalore | 2022-06-10 |
| 4 | Asha Gupta | Pune | 2021-07-25 |

Orders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| OrderID | CustomerID | RestaurantID | OrderDate | TotalAmount | Status |
| 101 | 1 | 1 | 2023-01-15 | 1200 | Delivered |
| 102 | 2 | 2 | 2023-02-17 | 800 | Cancelled |
| 103 | 1 | 4 | 2023-03-20 | 500 | Delivered |
| 104 | 3 | 3 | 2023-03-22 | 950 | Delivered |
| 105 | 4 | 2 | 2023-04-10 | 650 | Delivered |
| 106 | 2 | 1 | 2023-05-14 | 1200 | Delivered |

MenuItems

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ItemID | RestaurantID | ItemName | Category | Price |
| 201 | 1 | Paneer Butter Masala | North Indian | 350 |
| 202 | 1 | Garlic Naan | North Indian | 50 |
| 203 | 2 | Veg Burger | Fast Food | 150 |
| 204 | 2 | Cheese Pizza | FastFood | 400 |
| 205 | 3 | Chicken Biryani | Hyderabadi | 450 |
| 206 | 4 | Pepperoni Pizza | FastFood | 500 |

## 🧠 Advanced SQL & Analytics Questions

1) Calculate total revenue generated by each restaurant in 2023.

2) Find the top 2 restaurants by revenue.

3) List customers who have placed orders from more than 1 city.

4) Identify restaurants that have never had a cancelled order.

5) Calculate month-over-month revenue growth for each restaurant.

6) Find the most expensive menu item for each restaurant.

7) List menu categories that appear in at least 2 different restaurants.

8) Retrieve each customer's first and most recent order date.

9) Calculate running total revenue for each restaurant.

10) Find restaurants where all menu items are priced above 100.

🎯 Bonus:

Determine each restaurant's contribution (%) to total platform revenue.