# Day 30 – SQL + Analytics Scenario Challenge

This challenge is designed as a real-world hiring assessment. It combines SQL querying, data cleaning logic, analytical thinking, and business context understanding. The dataset is based on an online marketplace and includes realistic fields.

## Dataset: Online Marketplace

Sellers

|  |  |  |  |
| --- | --- | --- | --- |
| SellerID | SellerName | JoinDate | City |
| 1 | TechWorld | 2021-05-10 | Delhi |
| 2 | StyleHub | 2020-08-15 | Mumbai |
| 3 | HomeNeeds | 2019-11-20 | Bangalore |
| 4 | GadgetMart | 2022-01-05 | Pune |

Products

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ProductID | ProductName | Category | Price | SellerID |
| 101 | Laptop | Electronics | 55000 | 1 |
| 102 | Headphones | Electronics | 2500 | 1 |
| 103 | T-Shirt | Clothing | 800 | 2 |
| 104 | Jeans | Clothing | 1800 | 2 |
| 105 | Microwave | Home Appliances | 7000 | 3 |
| 106 | Vacuum Cleaner | Home Appliances | 5000 | 3 |
| 107 | Smartphone | Electronics | 22000 | 4 |

Customers

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

Orders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| OrderID | CustomerID | ProductID | OrderDate | Quantity |
| 1001 | 1 | 101 | 2023-01-15 | 1 |
| 1002 | 2 | 103 | 2023-02-17 | 2 |
| 1003 | 1 | 107 | 2023-03-20 | 1 |
| 1004 | 3 | 105 | 2023-03-22 | 1 |
| 1005 | 4 | 104 | 2023-04-10 | 3 |
| 1006 | 2 | 102 | 2023-05-14 | 1 |

## 🧠 Scenario-Based SQL Questions

1) Calculate total revenue generated by each seller.

2) Find top 2 best-selling products by quantity sold.

3) Identify sellers who have not sold any product in 2023.

4) List customers who have ordered from more than one category.

5) Show month-over-month revenue growth for 2023.

6) Find the category with the highest average selling price.

7) List products that have never been ordered.

8) Retrieve each customer's first purchase date and product.

9) Calculate running total revenue for each seller.

10) Find sellers whose all products belong to the same category.

Bonus:

Determine each seller’s contribution (%) to total marketplace revenue.