📘 SQL 100 Days Challenge – Day 63 Reflection

📅 **Date: Day 63**

📁 **Dataset Theme: Retail Orders, Customers & Products**

✅ **Today's Learning Summary:**

Day 63 felt smooth and straightforward compared to the past few sessions. The dataset focused on **customers, products, orders, and order details**, and the queries revolved around mastering joins, aggregations, subqueries, and window functions.

🔑 **Key Learnings & Observations:**

1. **Basic Join & Aggregation**

   o Easily listed customers with their total order amounts.

   o Confidence in grouping and aggregation is stronger now.

2. **Top Products by Revenue**

   o Ranked products by sales revenue — easy to implement and interpret.

3. **Filtering by Condition**

   o Extracting Indian customers' orders was simple and quick.

4. **Date Functions**

   o Used YEAR(), MONTH(), and DATENAME() to analyze monthly order counts.

5. **CASE Statements**

   o Categorized customers into *High Value* vs *Regular* based on total spend.

6. **Window Functions**

   o Applied ROW_NUMBER() to fetch the most recent order per customer.

   o Ranked customers by loyalty points using RANK() — smooth execution.

7. **Subqueries**

   o Identified products never ordered using both LEFT JOIN and NOT IN approaches.

8. **Recursive CTE for Running Totals**

   o Implemented cumulative order totals — worked out well.

9. **Advanced Joins + Aggregation**

   o Found average spend per customer for each category — insightful query.

10. **Bonus Challenge**

   o Identified the top revenue-contributing customer with contribution percentage.

   o The query was straightforward and executed successfully without issues.

🌟 **Personal Reflection:**

Compared to earlier days, today's session felt **easy and refreshing**. Every query was solved smoothly with minimal confusion, showing how much stronger my SQL foundation has become. Even concepts like **window functions and subqueries** that once felt intimidating now come naturally.

This session reinforced the power of **daily consistency** — tough queries that were once a struggle now feel like second nature.

📌 **Takeaway:**

👉 **Daily practice transforms complexity into clarity.**
👉 Even on "easy" days, the learnings add up to long-term mastery.