SQL 100 Days Challenge – Day 42 Reflection

Topic: Customer & Orders Analysis (Intermediate → Advanced)

Dataset: Customers and Orders

Key Learnings:

1. **Revenue Analysis:** Summed total revenue by region, excluding cancelled/returned orders.

2. **Customer Insights:** Identified top spenders, repeat customers, and those with only cancelled/returned orders.

3. **Prime vs Non-Prime:** Calculated prime customer percentage per region and AOV comparison.

4. **Window Functions:** Running total revenue per customer; regional revenue ranking with CTE + window functions.

5. **Aggregation & Grouping:** Monthly revenue trends, highest single order, and order counts.

Insights:

- South and West emerged as strong contributors in delivered revenue.

- Prime customers showed higher engagement and better order values.

- Repeat customers were identifiable, crucial for loyalty analysis.

- Revenue share % highlighted which regions drive the most business.

- Peak revenue month identified for demand planning.

Skills Reinforced:

- Self & multi-table joins

- Window functions: SUM() OVER, RANK()

- CTEs for modular complex queries

- Grouping with filters (HAVING, CASE)

- Percentage calculations in SQL

Next Steps:

- Analyze cancellation/return rates per region.

- Compare seasonal trends across years.

- Build customer retention metrics (churn vs loyalty).