

SQL 100 Days Challenge – Day 59 Reflection

◆ Overview

Day 59 was an insightful continuation of my SQL journey. Today's dataset revolved around **customers, restaurants, orders, deliveries, and ratings**, making it closer to real-world food delivery and restaurant analytics scenarios.

The focus was on **business intelligence use cases** like revenue, loyalty, customer satisfaction, delivery times, and at-risk restaurants.

◆ Key Learnings from Today

1. Revenue & Ranking:

- Wrote queries to calculate top restaurants by revenue.
- Learned how to combine aggregation with sorting for business KPIs.

2. Customer Behavior:

- Identified customers ordering from multiple cuisines.
- Practiced `COUNT(DISTINCT ...)` and string aggregation (`STRING_AGG`).

3. Delivery Insights:

- Used window functions (`RANK`, `DENSE_RANK`) to compare average delivery times across cities.
- Detected late deliveries by applying logical filters on `DeliveryTimeMins`.

4. Loyalty & Satisfaction:

- Created **CTEs with window functions** to identify the most loyal customer per restaurant.
- Analyzed orders where customer ratings were below restaurant averages – a useful dissatisfaction indicator.

5. Growth Tracking:

- Implemented **month-over-month revenue growth** using `LAG()` with aggregation.
- This query was complex but rewarding – closer to what's done in real analytics dashboards.

6. Risk Analysis (Bonus Case Study):

- Designed a query to detect **at-risk restaurants** (low ratings + high late deliveries).
- This combined business rules with SQL logic – a step towards real decision-making systems.

◆ Challenges Faced

- **Complex Aggregations:** Queries like customer dissatisfaction (Q10) required multiple joins and subqueries.
- **MoM Revenue Growth:** Needed careful grouping and handling of NULLIF to avoid division errors.
- **Bonus Question:** Bringing together ratings and delivery metrics was tricky, but consistent practice with CTEs helped.

◆ Wins of the Day

- ✓ Comfortably used **window functions** (RANK, LAG, running totals).
- ✓ Handled **multi-level grouping and subqueries** effectively.
- ✓ Realized how SQL can power insights for **business strategy** in food delivery and restaurant platforms.

◆ Reflection

Earlier, such problems felt overwhelming, but now I can approach them step by step. Today reaffirmed how much **daily practice sharpens logic and SQL fluency**. The ability to analyze **customer satisfaction, loyalty, and growth** using SQL felt like applying data to solve actual business problems.

✨ Looking forward to Day 60 – stepping into the next phase of this challenge with more confidence! 🚀