



Day 20 – SQL Practice Reflection

 Date: August 01, 2025

 Theme: Telecom Customer Analytics (Plans, Calls, Subscriptions, Revenue)

Summary

Day 20 brought realistic and challenging scenarios from a telecom dataset. The focus was on customer plan details, call usage, revenue patterns, and long-term subscribers. The practice was more logic-intensive today, and every query had room for deeper SQL optimization.

Key Learnings & Observations

1. For Q1, I refined the query to show only customers with active subscriptions using ``EndDate IS NULL OR EndDate > GETDATE()`.`
2. Q3 and Q4 were especially time-consuming due to their logic-heavy requirements, involving ``GROUP BY`, `HAVING`,` and join conditions.
3. Overall, all questions required analytical thinking, precision filtering, and multiple joins, definitely a step up in difficulty.
4. Learnt a new SQL trick while solving the bonus question, especially using ``NOT EXISTS`` to check if customers have had only one plan since joining.
5. Comfort with JOINS and subqueries is increasing. I now apply WHERE/HAVING filters more thoughtfully.

SQL Concepts Practiced

- Date-based filtering for active/inactive subscriptions
- Multi-table joins with aggregation and conditional logic
- Use of ``HAVING`, `GROUP BY`,` and conditional SUM comparisons
- Proper join type selection (LEFT vs INNER JOIN)
- Application of ``NOT EXISTS`` for bonus logic
- Use of functions like ``STRING_AGG`, `DATEDIFF`,` and ``ROUND``

Takeaway

“Progress is now measurable not just by completion, but by clarity, confidence, and query speed. The real-world feel of today’s questions sharpened my practical SQL mindset.”