Reflection Report – Day 14 SQL Practice

📅 Date: 24 July 2025

📊 Topic: SQL Practice – Online Learning Platform Dataset

🎨 Reflection Summary

Today's SQL practice involved working with a dataset from an Online Learning Platform, including Students, Courses, Enrollments, and Progress tables. I successfully solved all 10 questions and the bonus challenge. This session helped reinforce my skills in joins, group-by aggregations, window functions, and conditional filtering.

☑ Key Learnings & Concepts Practiced

1. Used LEFT JOIN with aggregation to handle missing records (Q2, Q8).

2. Applied COUNT, SUM, and AVG for revenue and performance analysis (Q3, Q5, Q8).

3. Practiced RANK() window function inside a CTE to extract highest revenue courses by category (Q10).

4. Reinforced GROUP BY with HAVING to filter grouped conditions (Q9).

📝 Personal Notes

1. Learnt a new technique of starting the query directly with `WHERE` in Question 7 – cleaner and efficient.

2. Learnt and implemented the `ISNULL` function in Question 8 – helpful for NULL-safe averages.

3. Understood how to combine both `WHERE` and `HAVING` clauses in one query – used in Question 9.

4. The Bonus Challenge was tougher – took longer to build the correct logic to compute student-wise average completion.

✳ Final Thoughts

This was one of the most enriching SQL sessions so far. I applied a range of SQL concepts including conditional joins, window functions, nested logic, and learned a few new tricks along the way. Though the bonus challenge was tricky, it helped me grow more confident in thinking through multi-step logic.