Day 17 – SQL Practice Reflection

📌 Summary of Practice

Day 17's practice session focused on analyzing user behavior and content performance from a video streaming platform dataset. The dataset included realistic tables: Users, Shows, Views, and Ratings.

🧠 What I Learned Today

1. Learned to use `SELECT DISTINCT` for identifying users who watched but didn't rate a show (Query 4).

2. Question 6 required advanced logic using CTE + `RANK()` — took time to build and validate.

3. Question 7 helped reinforce the use of `COUNT(DISTINCT)` + `HAVING` for complex filters.

4. Bonus challenge was logically easy to understand, but its `MIN(Rating)` + `HAVING` logic was tricky to get right.

🔍 Schema Design & Constraints Used

- Tables were created with strong constraints like CHECK, NOT NULL, and ON DELETE CASCADE for referential integrity.
- Default values and sensible age/date restrictions were implemented.
- Unique constraint on (UserID, ShowID) in Ratings ensured one rating per user per show.
- Indexes were added on frequently joined columns (UserID, ShowID) to improve performance.

⚙️ Improvements Made

- Used `ROUND()` and `ISNULL()` to handle numeric formatting and null watch durations.
- Refactored JOINs to LEFT JOINs where appropriate to preserve unmatched records.
- Structured queries to make use of best practices like filtering in WHERE vs JOIN ON clauses.

💡 Favorite Queries & Takeaways

✓ Query 6 (top-rated show per genre) and the bonus query were the most insightful, both logically and technically.

✓ Gained deeper confidence working with CTEs, aggregations, and multiple-level filters.

🚀 Final Thoughts

Today's set was more challenging than usual. It required layered thinking and good grasp over SQL clauses. But finishing it felt rewarding — a good sign that my confidence is growing with each passing day!