Contents

Tips, Tricks, and Pitfalls

Level 7

I: Advanced Queries

Tip for this homework: Most of the questions in this assignment are quite challenging! Here is how you should approach them:

a. Make sure you fully understand the question and everything that is required. If a question asks for Market Value for Whale Rock make sure you know where we can find the fund name Whale Rock and what the calculation for Market Value is.
b. Solve the query in the simplest "cheating" manner. As in, you'll need to join to get Whale Rosk but to start off just use the Fund ID.
c. After your query results look good you can keep adding joins and columns to your query until it completely satisfies the request.

The weighted average question is one of the most difficult in the course. The tips in the homework should be very helpful. One extra tip is this: For a weighted avg calc in SQL it's really just a simple fraction in the end. There will be a SUM on top and a SUM on bottom.

II: Subquery

Realistically, you will almost never use a subquery. Almost always a CTE or temp table can do the job cleaner and quicker, and definitely more efficiently.

III: Common Table Expression (CTE)

CTEs are used A LOT, especially in finance. They are clean, very easy to read, and quite easy to use. However they aren't super-efficient.

Feel free to use CTEs in your solutions, but almost always temp tables are better.

For 7.2.3, you might need to use joins within your first two CTEs. The question was designed very specifically to see how well you want work with CTEs. Missing ANY of the requested column names in each CTE will result in an incompletely mark for this question.

IV: Deterministic Function

Before you target these challenging questions, I strongly suggest you build something very simple. Build a function that takes in an employee_id and returns the sum of all trades made but that employee, with no filters. This should be a very simple query and will be a good way for you to practice building your own functions.

7.3.2 Tip: Use a CASE WHEN

7.3.3 Tip: In MySQL you can only return a single value and the homework requested that you return a bunch of values. A nice way around this would be to concatenate the values into a single string separated by pipes such as:

1000|1200|2455.6|36

Syntax: CONCAT(str1, str2, …)

V: Temporary Table

Only one suggestion here. When the homework says "Create a temp table" it does NOT mean to load it. Write out the proper syntax for creating the table with all the columns set with their appropriate data types.

For the following question you can load the data into the table.

This isn't just for the homework. In general it is much safer to create the table correctly using the appropriate data type assignments your database uses.

VI: Stored Procedure

7.5.1 Make it VERY simple. Perhaps the SP should just take a start and end date as parameters and return the total quantity of all positions traded. This is just so you get a feel for creating your own SP.

7.5.2 This is the climax of the course. As such it should have joins, self joins, temp tables, case whens, the works. Have fun with this! Just make sure you return all of the columns requested.