Problem Solving Guidelines for SQL

Importance of Solving Assessments

It's really important to go to live classes and ask questions when you're not sure about something. But what's even more important is to consistently practice solving assessment questions. This will really help you understand the topic well and prepare you for jobs in data science.

Practicing regularly will make you an expert in the subject, and it's a way to tell the difference between beginners and experienced people in that subject.

Before you start attempting any kind of assessments -

- First, make sure you're aligned with the lecture content.
- It's important to watch the lecture, preferably by attending a live class, so that you understand every concept that is taught.

If any topics/concepts are not clear, try to refer or seek help -

- Re-watch the lecture video or refer to the notes provided by the instructor.
- Refer to this extra reading material link
- Make sure you clarify your doubts in the doubt sessions after each class.

Now start solving the assessment questions:

- Read the questions carefully, if you don't understand the question heading DON'T PANIC.
- Re-read the question, catch the important terms and concepts in the question, try to relate in which part of the lecture this concept was taught.
- Now given a focussed reading, MAGIC happens. You will definitely understand what is being asked.

What to do in case you stumble or are stuck anywhere?

1. Refer to your class lecture video & notes.
2. You can also Google stuff without any hesitation.
3. Few sites that will guide you :
    a. https://www.w3schools.com/
    b. https://www.tutorialspoint.com/index.htm
    c. www.geeksforgeeks.com
4. Lots of other free resources are available on the internet, leverage it.

You know the concepts but still struggling to get started with solving the question?

Follow the steps in the proper sequence mentioned below:

1. Discuss it with your peers
2. Hints
3. Solution Approach
4. Video Explanation
5. Raise a TA help request
6. Reach out to the instructor

In case if you find any error / ambiguity in some question / solution -

- Flag this issue immediately on your Slack group, tag your instructor.
- You can also raise a support ticket or reach out to support@scaler.com.
- We will try to get it resolved as soon as possible.

What not to do?

1. Do not start attempting the assessments until you've watched the lecture and are aligned with the topic.
2. Do not unnecessarily raise a TA Help Request until you've gone through the hints, solution approach and video explanation.

Few things to keep in mind:

- TAs and Instructors are always available for help but you need to give your 100% to a problem before raising a help request.
- The more precise or refined your doubt is, the quicker the resolution from TA/Instructor side. Please provide proper screenshots of the issue that you're facing.

How to handle errors while writing queries?

1. SPELLING MISTAKES:
    a. If your results are getting generated and look similar to the expected output, you are probably making a column spelling mistake somewhere.
    b. Writing *weighted_avg* instead of *Weighted_avg* is also a spelling mistake as column names are case sensitive.

2. USING DOUBLE QUOTES
    a. Double quotes **(" ")** are not accepted by all platforms.
    b. Please use single quotes **(' ')** wherever necessary.

3. WRONGLY USING QUOTES:
    a. Quotes are required when we are specifying string values.
    b. They are commonly used in WHERE clauses when comparing string(char/varchar) based columns. *Example: name = 'Pulkit'*.
    c. When creating new columns, quotes are not necessarily required.
        i. Simply writing *cost * quantity* as *total_cost* is fine.
        ii. *cost * quantity* as *'total_cost'* is UNNECESSARY

4. MISSING COMMAS OR EXTRA COMMAS:
    a. Forgetting to add commas after every column will result in error.
    b. Make sure all columns are separated by comma.
    c. Comma is not required after the last column.
    d. Presence of a comma in the end will also result in errors.

5. LOGICAL ERRORS:
    a. If your answer is not matching with the expected result, that means you are not handling certain requirements as per the question.
    b. Figure out if your answer has extra rows or missing rows and change the query accordingly