**TDI SQL WEEK 5**

**Introduction**

**Welcome to SQL week 5!**

In this week’s SQL practice, focusing on subqueries. Subqueries, also known as inner queries or nested queries, are a powerful tool in SQL that allow you to perform complex queries by embedding one query within another. This can help you retrieve data that relies on the results of another query, making your data analysis more precise and insightful.

In this set of questions, you'll be using subqueries to uncover detailed insights from your sales data. Each question will challenge you to dig deeper into the data, find specific patterns, and extract meaningful information that can inform business decisions. Let's dive into the questions and explore how subqueries can help us answer them.

Tips for Working with Subqueries

**Understand the Problem:** Before writing a subquery, make sure you understand what the main query and the subquery need to accomplish.

**Break It Down:** Start with the innermost query and gradually build outwards. This helps in understanding each part of the query.

**Use Aliases:** Aliases can make your queries more readable and easier to manage, especially when dealing with complex subqueries.

**Test Incrementally:** Run each subquery independently to ensure it returns the expected results before integrating it into the main query.

**Instruction:** You are to use the Sales Table provided.

**PART A**

**Resources:**

**Link 1:** <https://youtu.be/JksrTuEVEPk?si=8gZW9_i1kXWw_DDE>

**Link 2:** https://www.youtube.com/watch?v=nJIEIzF7tDw

LINK 3: <https://youtu.be/JksrTuEVEPk?si=1FF58Pk5m1BpFxSv>

LINK 4: <https://youtu.be/m1KcNV-Zhmc?si=X84Zsl_THFV0UYKD>

LINK5: <https://youtu.be/GpC0XyiJPEo?si=WnicLj-5jPcAmgjC>

**PART B**

1. Which date(s) had the highest total sales and which product(s) contributed to those sales?
2. Which product(s) had the highest average unit price among all products sold
3. What were the total sales for each product on dates where the quantity sold exceeded the average quantity sold for that product?
4. What were the top 3 dates with the highest total sales, and which product(s) contributed to those sales on each date?
5. What percentage of the total sales on April 15th, 2024, did each product contribute?
6. Which product(s) had the highest total sales over any consecutive 3-day period?
7. On which date(s) did product C's total sales exceed the combined total sales of all other products?
8. What were the cumulative total sales for each product over the entire period covered by the dataset, ordered by date?

**PART C**

**SUBMISSION MODE**

You are expected to submit your assignment a week after it was given, with this, Submission starts from Friday by 7am Nigerian time to Saturday by 3pm Nigerian time.

This submission will be done either on Twitter or LinkedIn, you can choose either of the two to submit your assignment or you can submit on both platforms. You would take a screenshot of your work Answers, you can add a write up if you want.

For twitter Submission, you would tag:

1. The TDI Official page @TDataInitiative
2. Annie @ DabereNnamani
3. Ade@Jacob\_ajala
4. Tag @SQLServer
5. Use the #TDI

For LinkedIn Submission, you would tag:

1. TDI page @TheData Initiative
2. Annie @ Anne Nnamani

**PART D**

**CORRECTION CLASS**

Correction Classes, holds every Saturday, 4pm-6pm Nigerian time.

Venue: The TDI official Discord page or a google meet link will be sent.