**STRUCTURED QUERY LANGUAGE**

**INTERMEDIATES SQL QUESTIONS (WEEK 5)**

**Topic: Views and CTEs**

**Instruction:** You are to use the sales table

**PART A (Resources)**

**Link:** <https://youtu.be/vncBSUNb4NA?si=rgxEKuCAsWbQIyi->

**PART B (Questions)**

**Views:**

1. Create a view named ‘sales\_summary’ that shows the total sales, quantity, and profit for each region.
2. Modify the ‘sales\_summary’ view to include the category and subcategory columns.
3. Drop the ‘sales\_summary’ view.
4. Create a view named ‘customer\_sales’ that shows the total sales and profit for each ustomer.
5. Modify the ‘customer\_sales’ view to include the city and state columns.
6. Create a view named ‘product\_sales’ that shows the total sales and profit for each product category and subcategory.

**Advanced SQL queries**

1. Write a query to find the top 3 customers with the highest total sales.
2. Write a query to find the total sales and profit for each region, including only orders with a specific ship mode.
3. Write a query to find the average sales and profit for each category and subcategory.
4. Write a query to find the top 3 products with the highest total sales and profit.

**Window functions**

1. Write a query to find the running total of sales for each order
2. Write a query to find the average sales and profit for each region including a running total.
3. Write a query to find the total sales and profit for each product category and sub category including a running total.

**Common Table Expressions (CTEs)**

1. Write a query to find the total sales and profit for each region using a CTE to calculate the running total.
2. Write a query to find the top 3 customers with the highest total sales, using a CTE to calculate the ranking.
3. Write a query to find the average sales for each category and subcategory using a CTE to calculate the running average.
4. Write a query to find the total sales and profit for each customer using a CTE to calculate the running total.
5. Write a query to find the total sales and profit for each region using a CTE to calculate the running total and including only orders within a specific year and month.

**PART C (Submission Mode)**

You are expected to submit your assignment a week after it was given, with this, Submission starts from Friday 7am Nigerian time to Saturday 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 can 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. The project coordinator @The\_Jonathaan
4. Tag @msexcel
5. Use the #TDI

For LinkedIn Submission, you would tag:

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