

DS5003 Data Engineering Lab

Assignment-8, Date: Oct 4, 2024

Timing: 2:00 to 4:45 PM

Max Marks: 5

Instructions

1. Submit one .pdf file containing all answers. The name should be **[student name]_assignment8.pdf**
 2. Write question **number, question, and query** before attaching the screenshot of the output.
 3. All questions need to be answered.
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Database: Northwind

1. Retrieve a list of employees along with their corresponding customer names based on the orders they have processed 0.25
2.
 - a. Create a view that calculates the total sales for each product, including product names and total sales amounts. Show the contents in it 0.25
 - b. Create a view to identify the top 10 customers based on the number of orders they placed and list their names and total order counts. 0.25
 - c. Pick random 5 products from the view created in (a) and show which of these products are purchased by these top customers and which suppliers provide them. 0.5

The output should include the Customer Name, Total Orders, Product Name, Total Sales, and Supplier Contact Name.
3. Create a view that displays the list of customers and the total number of orders they have placed. 0.25
4. Use the view created in Part A to answer Part B
 - a. Create a view in PostgreSQL that displays customer and supplier details for products categorized as 'Dairy Products' 0.25

- b. Count how many different dairy products are supplied by each supplier.0.25
- 5. Create a view to show the average unit price of products by supplier. 0.5
- 6. Create a function that returns the total number of orders for a given customer ID.
0.5
- 7. Create a function that calculates the total revenue from orders for a specific
product ID and shows it along with the product name 0.5
- 8.
 - a. Given the employee_ id, create a function to get the total number of orders
handled by that employee 0.25
 - b. Create a function that retrieves the names of the employees who have
handled the highest number of orders. Use the function created in (a) to get
the order count 0.5
- 9. Create a function that retrieves the total number of orders and the total revenue for
each employee based in London for August 1996. 0.5
- 10. Create a view from the relation order_details which displays the order_id,
quantity, product_id and unit_price. Try deleting a row from the order_details
and check how the view appears now. Similarly, delete a row from the created
view and show its effect on the order_details table. Write your observations with
justification as text along with corresponding screenshots. 0.25