SQL Task 5

DATA ENGINEERING

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BYTEWISE LDT

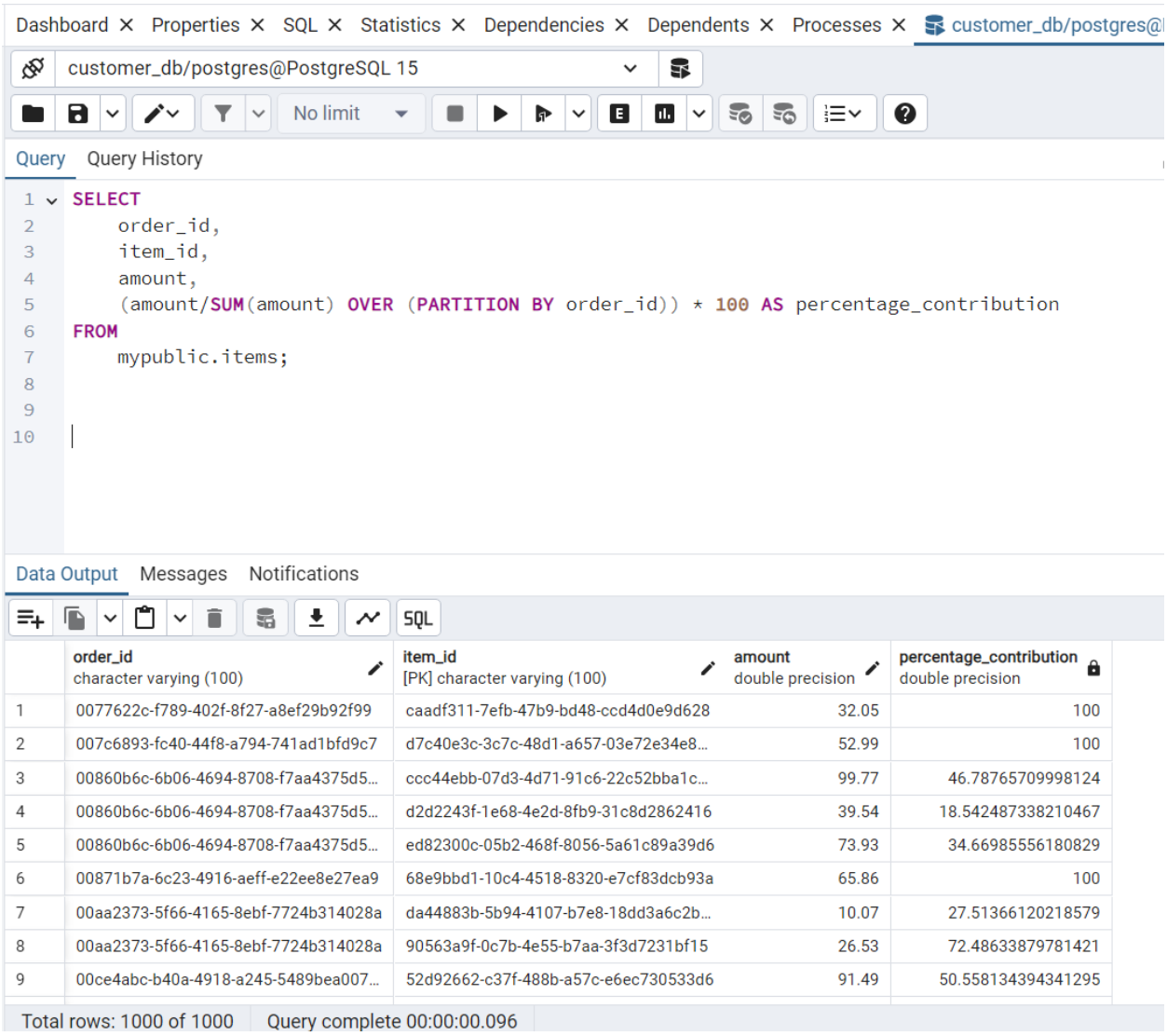
DE - Task 5

Q1: Write a query to calculate the percentage contribution of each item's amount to its order's total amount, grouped by order_id. (Topics: Partition BY)

Query:

```
SELECT
   order_id,
   item_id,
   amount,
   (amount/SUM(amount) OVER (PARTITION BY order_id)) * 100 AS percentage_contribution
FROM
        mypublic.items;
```

Result:



Q2: Write a query to rank orders by their total amount within each customer, ordering them from highest to lowest total amount. (Topics: Window functions like RANK, PARTITION BY, and ORDER BY)

Query:

```
SELECT
        order_id,
        total_amount,
```

customer_id,

rank() OVER (PARTITION BY customer_id ORDER BY total_amount DESC) AS orders_rank

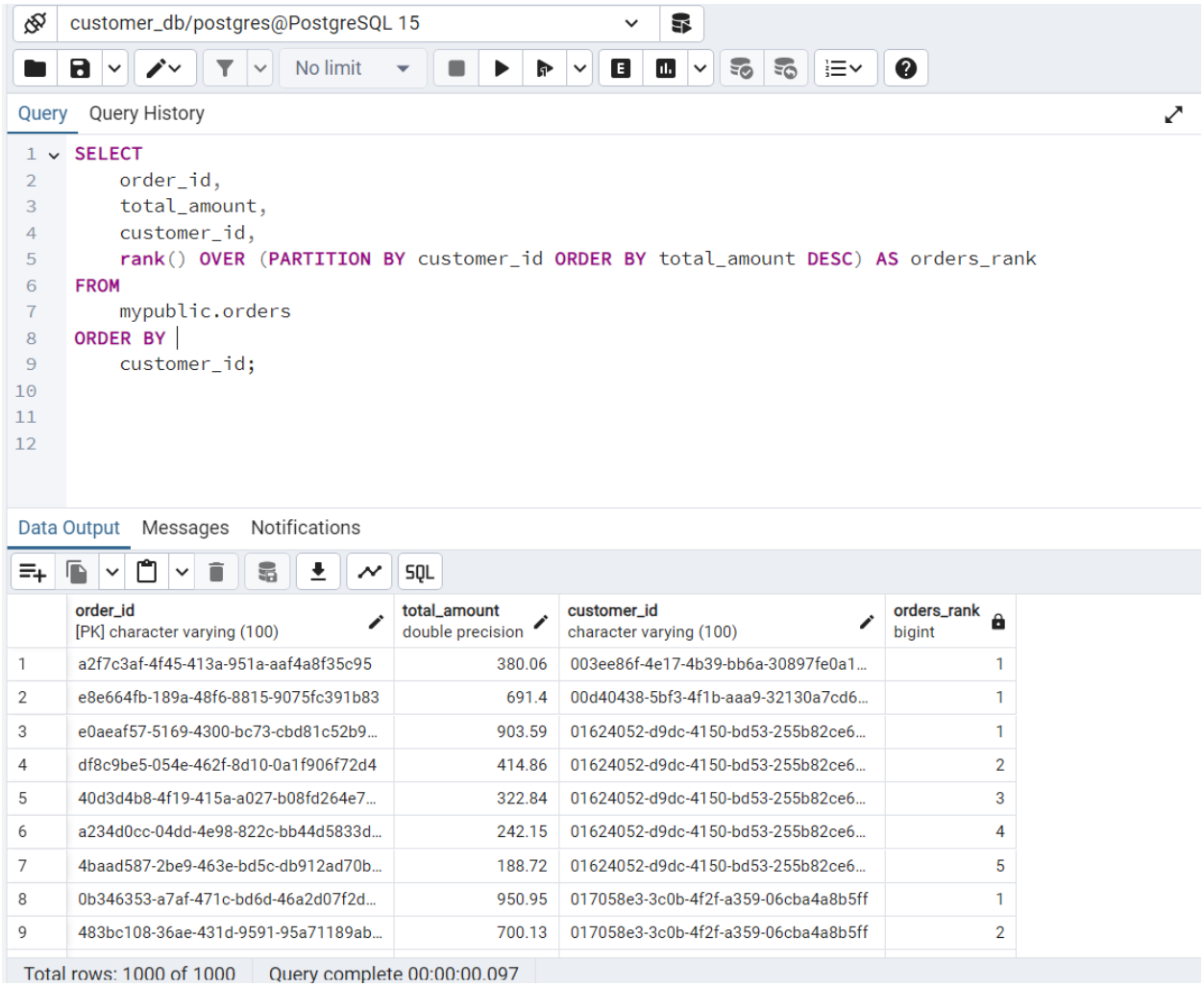
FROM

mypublic.orders

ORDER BY

customer_id;

Result:

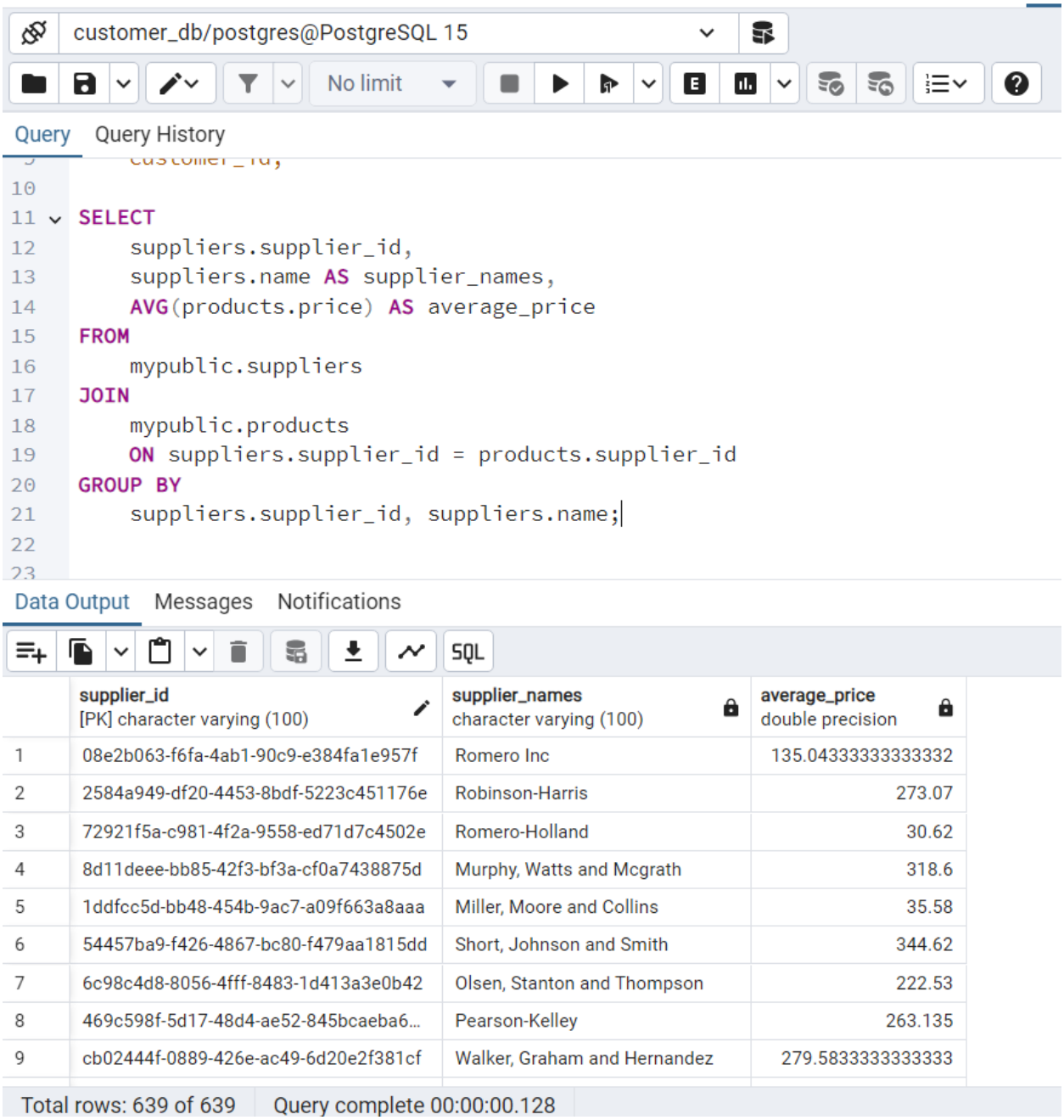


Q3: Write a query to calculate the average price of products supplied by each supplier. Exclude suppliers who have no products in the result. (Topics: JOINS, AGGREGATE FUNCTIONS, GROUP BY)

Query:

```
SELECT
   suppliers.supplier_id,
   suppliers.name AS supplier_names,
   AVG(products.price) AS average_price
FROM
   mypublic.suppliers
JOIN
   mypublic.products
        ON suppliers.supplier_id = products.supplier_id
GROUP BY
   suppliers.supplier_id, suppliers.name;
```

Result:



Q4: Write a query to count the number of products in each category. Include categories with zero products in the result set. (WINDOW FUNCTIONS, AGGREGATE FUNCTIONS, JOINS, GROUP BY)

Explanation:

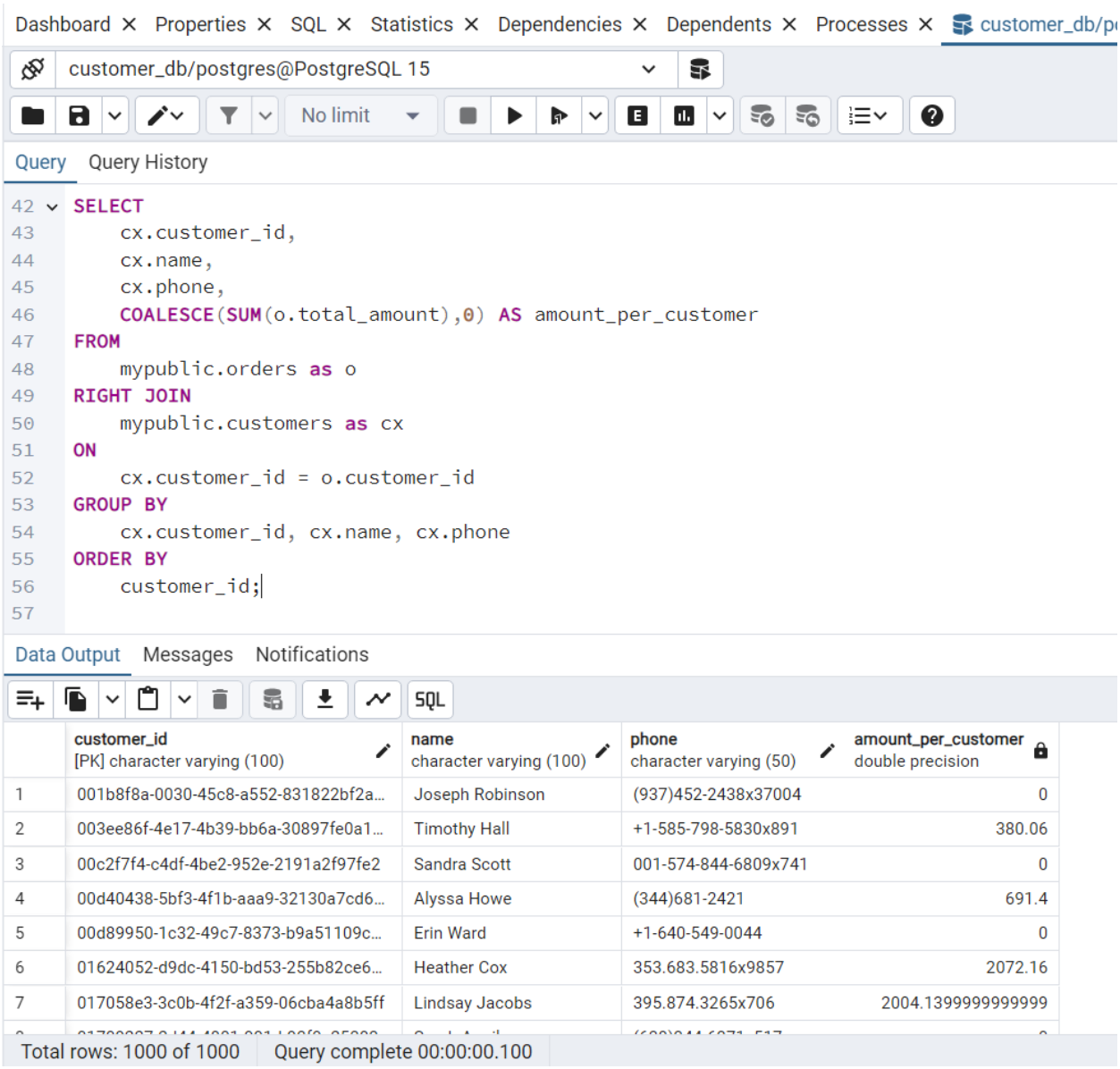
Can’t perform any JOIN function because there is no same column named as category_id in “products” TABLE in the given database.

Q5: Write a query to retrieve the total amount spent by each customer, along with their name and phone number. Ensure customers with no orders also appear with a total amount of 0. (WINDOW FUNCTIONS, AGGREGATE FUNCTIONS, JOINS, GROUP BY)

Query:

```
SELECT
        cx.customer_id,
        cx.name,
        cx.phone,
        COALESCE(SUM(o.total_amount),0) AS amount_per_customer
FROM
        mypublic.orders as o
RIGHT JOIN
        mypublic.customers as cx
ON
        cx.customer_id = o.customer_id
GROUP BY
        cx.customer_id, cx.name, cx.phone
ORDER BY
        customer_id;
```

Result:


Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
customer_db/p
customer_db/postgres@PostgreSQL 15
No limit
Query
Query History
42 SELECT
43 cx.customer_id,
44 cx.name,
45 cx.phone,
46 COALESCE(SUM(o.total_amount),0) AS amount_per_customer
47 FROM
48 mypublic.orders as o
49 RIGHT JOIN
50 mypublic.customers as cx
51 ON
52 cx.customer_id = o.customer_id
53 GROUP BY
54 cx.customer_id, cx.name, cx.phone
55 ORDER BY
56 customer_id;
57
Data Output
Messages
Notifications
SQL
customer_id
[PK] character varying (100)
name
character varying (100)
phone
character varying (50)
amount_per_customer
double precision
1 001b8f8a-0030-45c8-a552-831822bf2a... Joseph Robinson (937)452-2438x37004 0
2 003ee86f-4e17-4b39-bb6a-30897fe0a1... Timothy Hall +1-585-798-5830x891 380.06
3 00c2f7f4-c4df-4be2-952e-2191a2f97fe2 Sandra Scott 001-574-844-6809x741 0
4 00d40438-5bf3-4f1b-aaa9-32130a7cd6... Alyssa Howe (344)681-2421 691.4
5 00d89950-1c32-49c7-8373-b9a51109c... Erin Ward +1-640-549-0044 0
6 01624052-d9dc-4150-bd53-255b82ce6... Heather Cox 353.683.5816x9857 2072.16
7 017058e3-3c0b-4f2f-a359-06cba4a8b5ff Lindsay Jacobs 395.874.3265x706 2004.1399999999999
Total rows: 1000 of 1000
Query complete 00:00:00.100