1.     List all customers and the products they ordered with the order date. (Inner join)

**Tables used:** customers, orders, order\_details, products

**Output should have below columns:**

    companyname AS customer,

    orderid,

    productname,

    quantity,

    orderdate

 Query

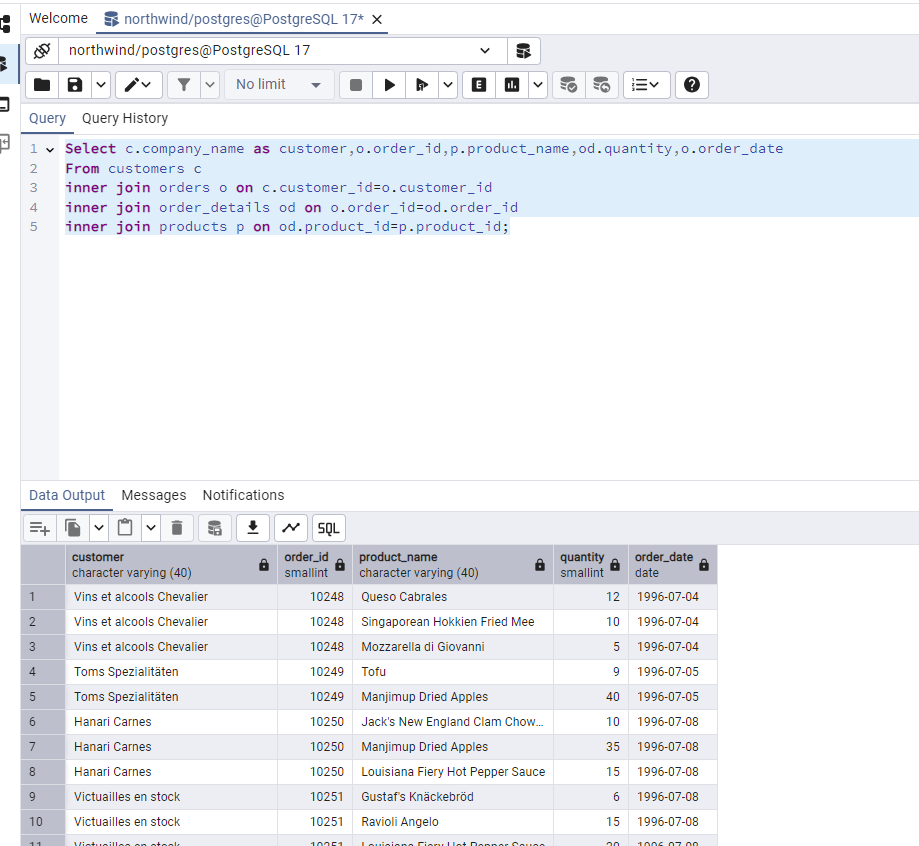
Select c.company\_name as customer,o.order\_id,p.product\_name,od.quantity,o.order\_date

From customers c

inner join orders o on c.customer\_id=o.customer\_id

inner join order\_details od on o.order\_id=od.order\_id

inner join products p on od.product\_id=p.product\_id;



2.     Show each order with customer, employee, shipper, and product info — even if some parts are missing. (Left Join)

**Tables used: orders, customers, employees, shippers, order\_details, products**

**QUERY**

SELECT o.order\_id,o.order\_date,c.customer\_id,c.company\_name AS customer\_name,e.employee\_id,

CONCAT(e.first\_name, ' ', e.last\_name) AS employee\_name,s.shipper\_id,s.company\_name AS shipper\_name,

p.product\_id,p.product\_name,od.quantity,od.unit\_price

FROM orders o

LEFT JOIN customers c ON o.customer\_id = c.customer\_id

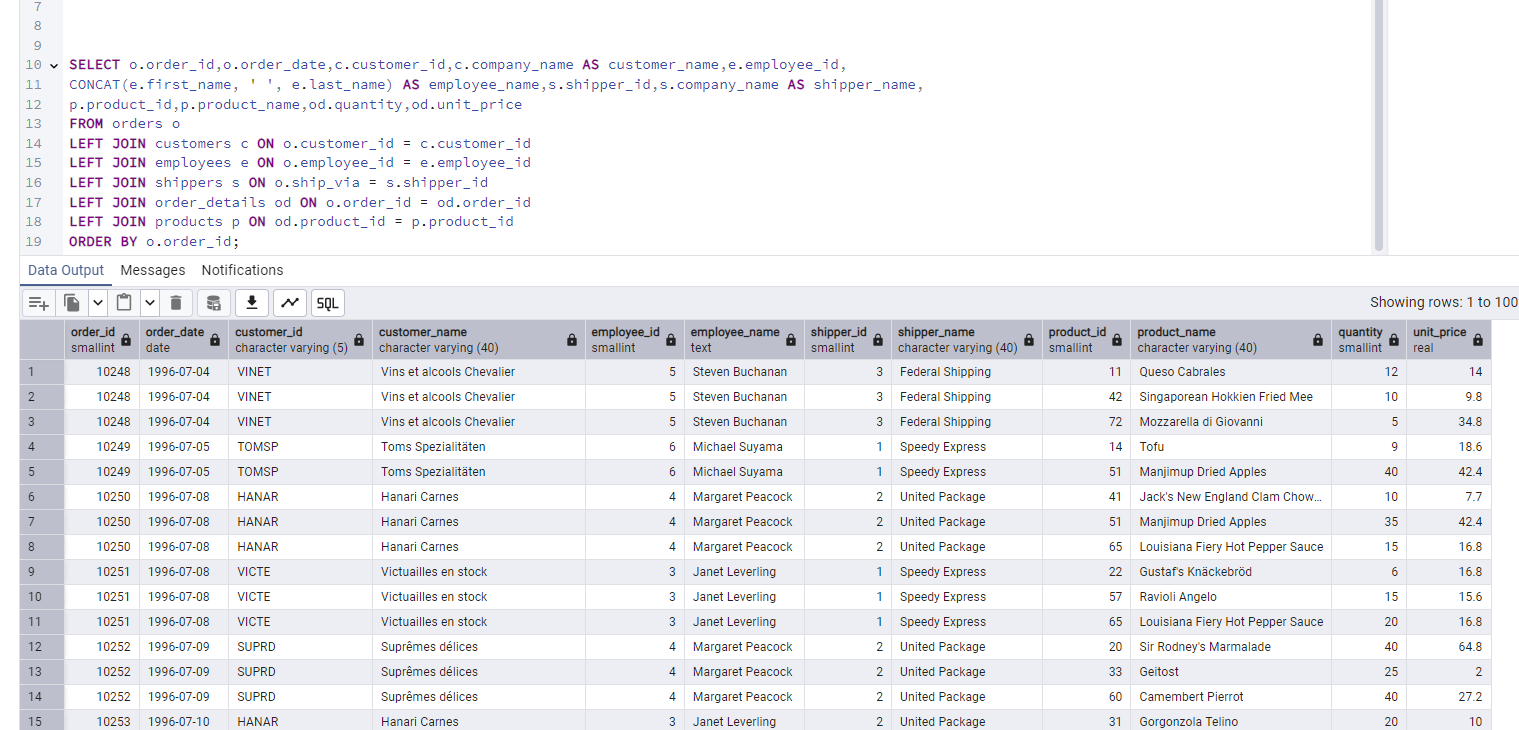
LEFT JOIN employees e ON o.employee\_id = e.employee\_id

LEFT JOIN shippers s ON o.ship\_via = s.shipper\_id

LEFT JOIN order\_details od ON o.order\_id = od.order\_id

LEFT JOIN products p ON od.product\_id = p.product\_id

ORDER BY o.order\_id;

****

3.     Show all order details and products (include all products even if they were never ordered). (Right Join)

**Tables used: order\_details, products**

**Output should have below columns:**

    orderid,

    productid,

    quantity,

    productname

QUERY

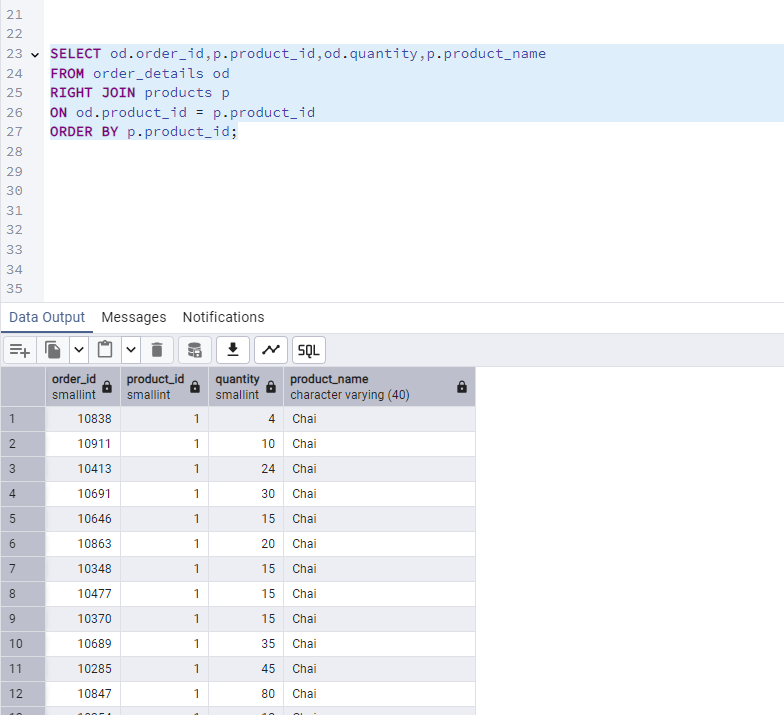
SELECT od.order\_id,p.product\_id,od.quantity,p.product\_name

FROM order\_details od

RIGHT JOIN products p

ON od.product\_id = p.product\_id

ORDER BY p.product\_id;



4. List all product categories and their products — including categories that have no products, and products that are not assigned to any category.(Outer Join)

**Tables used: categories, products**

**QUERY**

**SELECT**

c.category\_id,

c.category\_name,

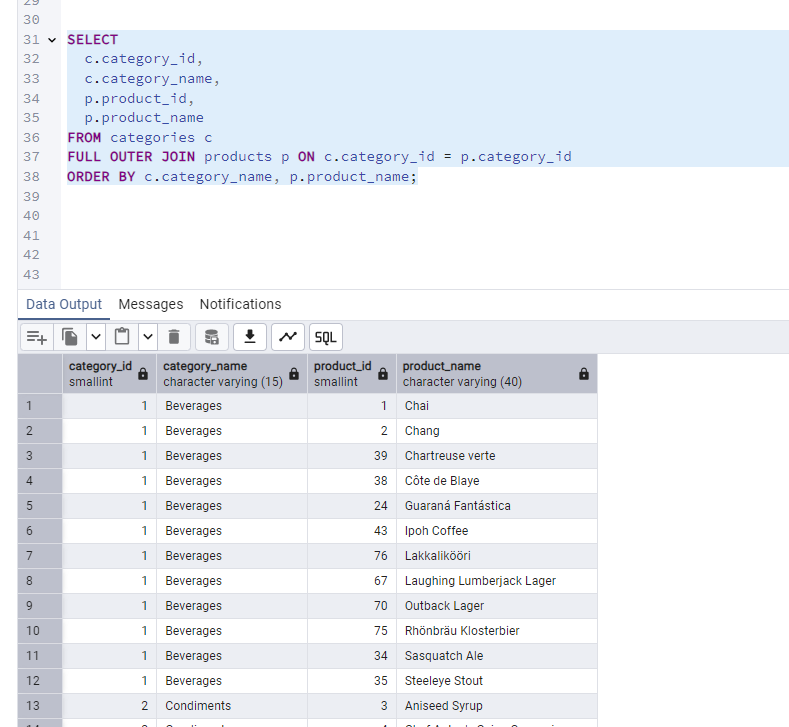
p.product\_id,

p.product\_name

FROM categories c

FULL OUTER JOIN products p ON c.category\_id = p.category\_id

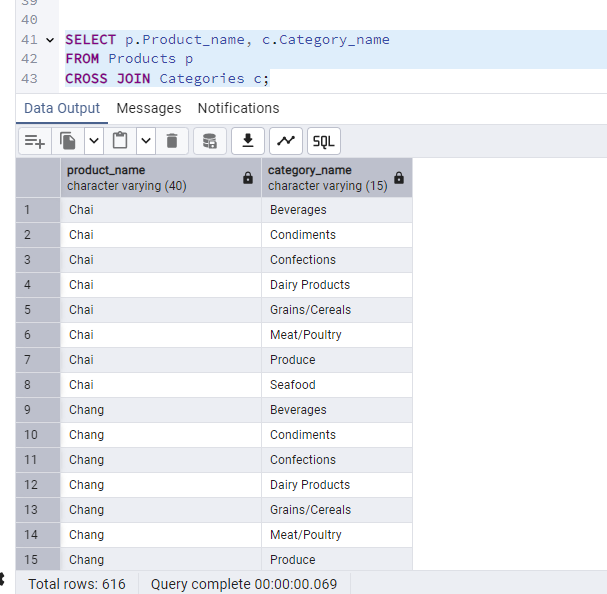
ORDER BY c.category\_name, p.product\_name;



5. Show all possible product and category combinations (Cross join).

QUERY

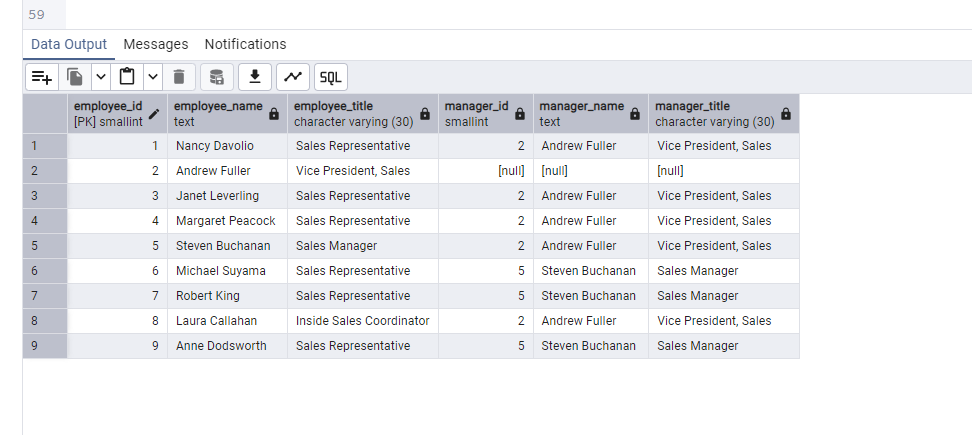
SELECT p.Product\_name, c.Category\_name  
FROM Products p  
CROSS JOIN Categories c;



6. Show all employees and their manager(Self join(left join))

QUERY

SELECT  
    e.employee\_id AS employee\_id,  
    e.first\_name || ' ' || e.last\_name AS employee\_name,  
    e.title AS employee\_title,  
    m.employee\_id AS manager\_id,  
    m.first\_name || ' ' || m.last\_name AS manager\_name,  
    m.title AS manager\_title  
FROM  
    employees e  
LEFT JOIN  
    employees m ON e.reports\_to = m.employee\_id;



7. List all customers who have not selected a shipping method.

**Tables used:** customers, orders

**(Left Join, WHERE o.shipvia IS NULL)**

**QUERY**

SELECT

c.customer\_id,

c.company\_name,

c.contact\_name,

c.phone

FROM

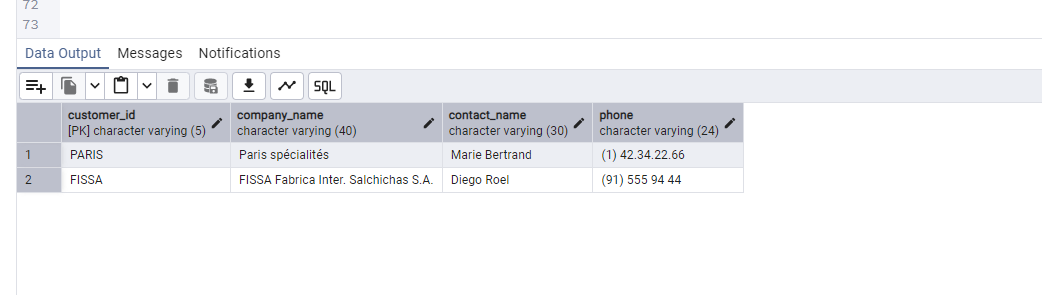
customers c

LEFT JOIN

orders o ON c.customer\_id = o.customer\_id

WHERE

o.ship\_via IS NULL;

****