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

select \* from customers;

select \* from products;

select \* from order\_details;

select \* from orders;

select c.customer\_id,c.company\_name as customer,

p.product\_name,od.quantity,o.order\_id,o.order\_date

from customers c

inner join

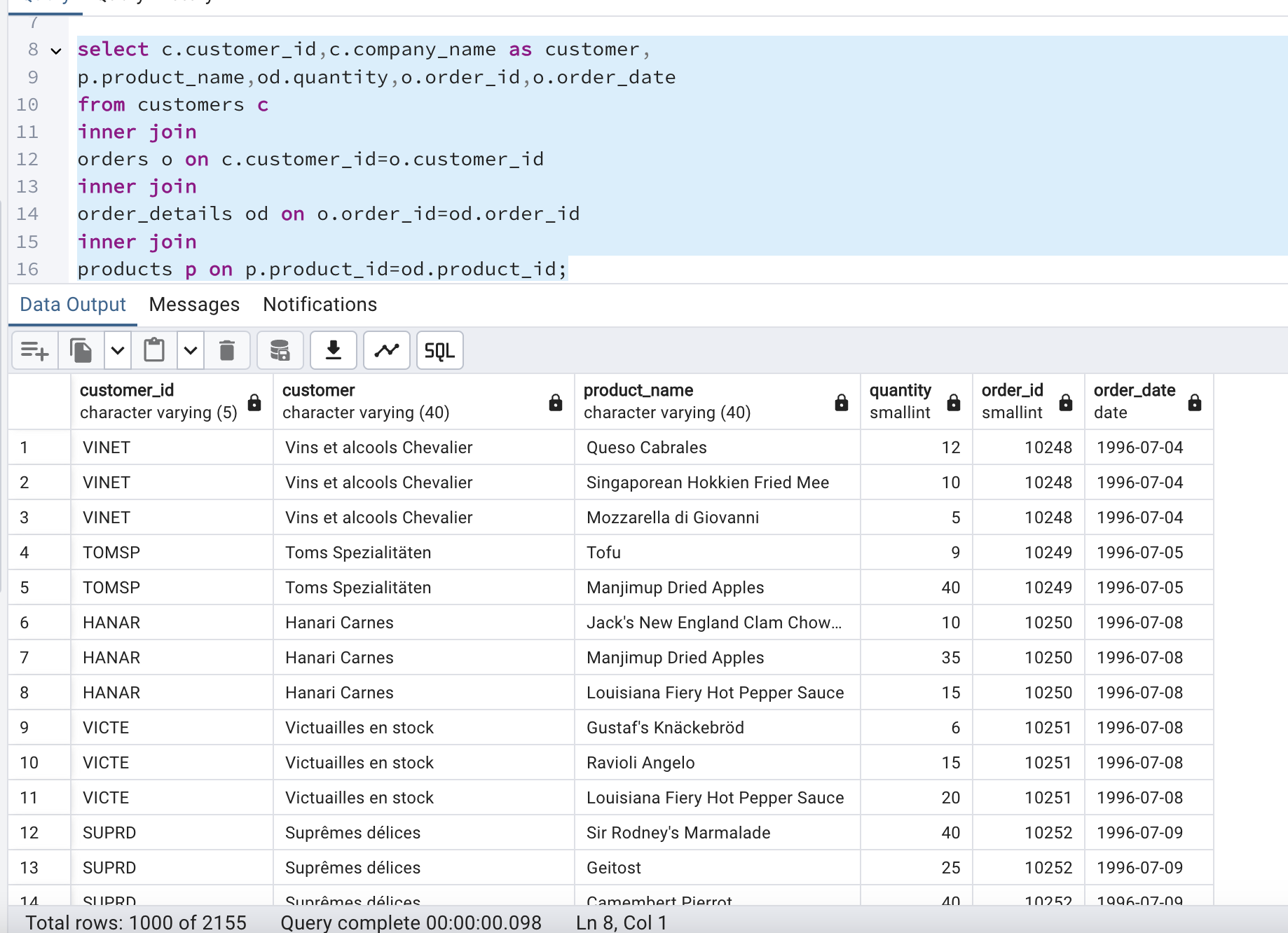
orders o on c.customer\_id=o.customer\_id

inner join

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

inner join

products p on p.product\_id=od.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**

**select o.order\_id as ordersplaced,**

**o.order\_date,o.customer\_id as customer,**

**c.company\_name,e.employee\_id,e.first\_name || '' || e.last\_name as employeename,**

**s.shipper\_id,s.company\_name as shipperscompanyname,**

**p.product\_id,p.product\_name,od.quantity**

**from orders o**

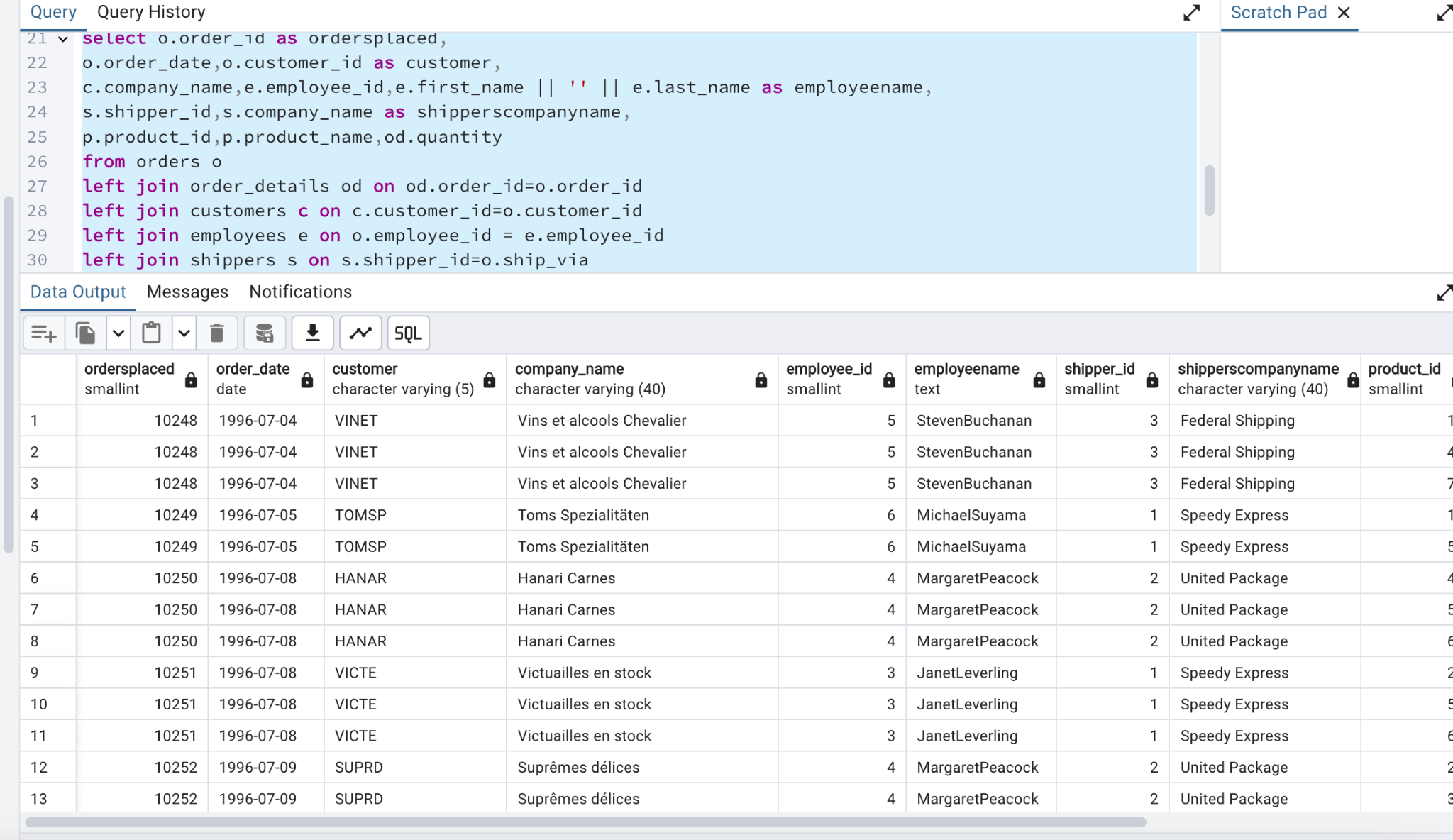
**left join order\_details od on od.order\_id=o.order\_id**

**left join customers c on c.customer\_id=o.customer\_id**

**left join employees e on o.employee\_id = e.employee\_id**

**left join shippers s on s.shipper\_id=o.ship\_via**

**left join products p on p.product\_id=od.product\_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,

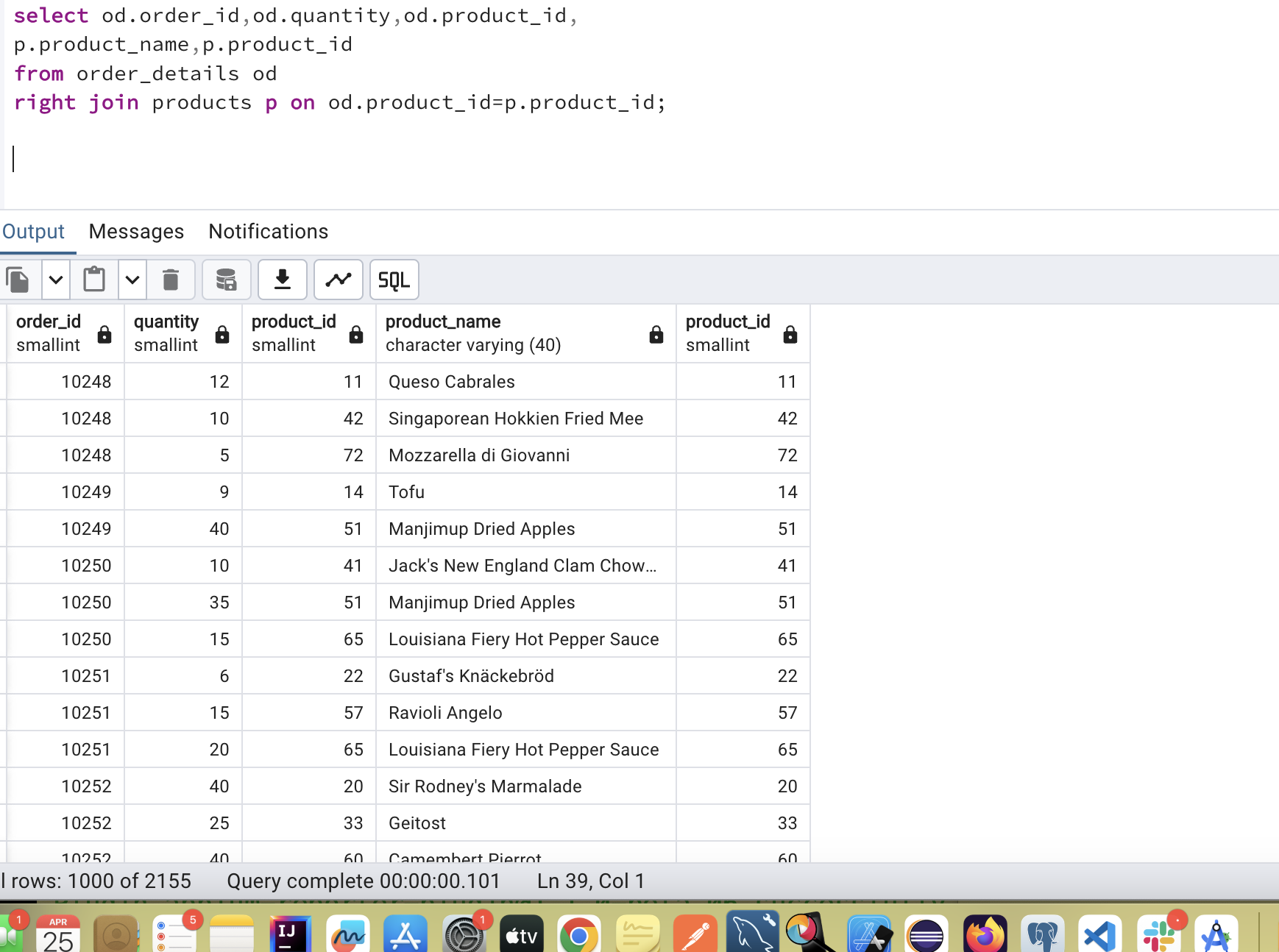
productname

select od.order\_id,od.quantity,od.product\_id,

p.product\_name,p.product\_id

from order\_details od

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



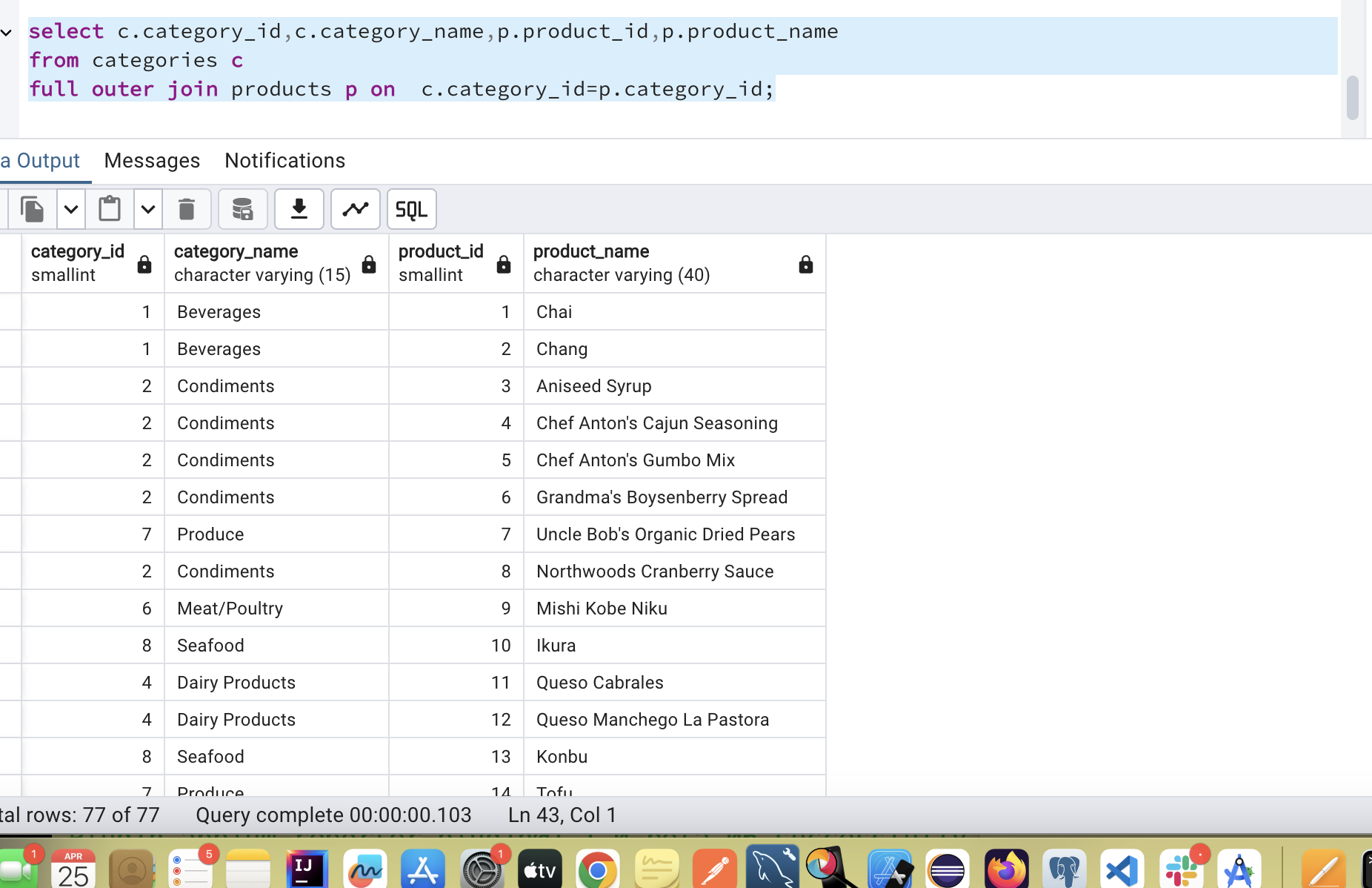
4. List all product categories and their products — including categories that have no products, and products that are not assigned to any category.(Outer Join)

**Tables used: categories, products**

**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;**

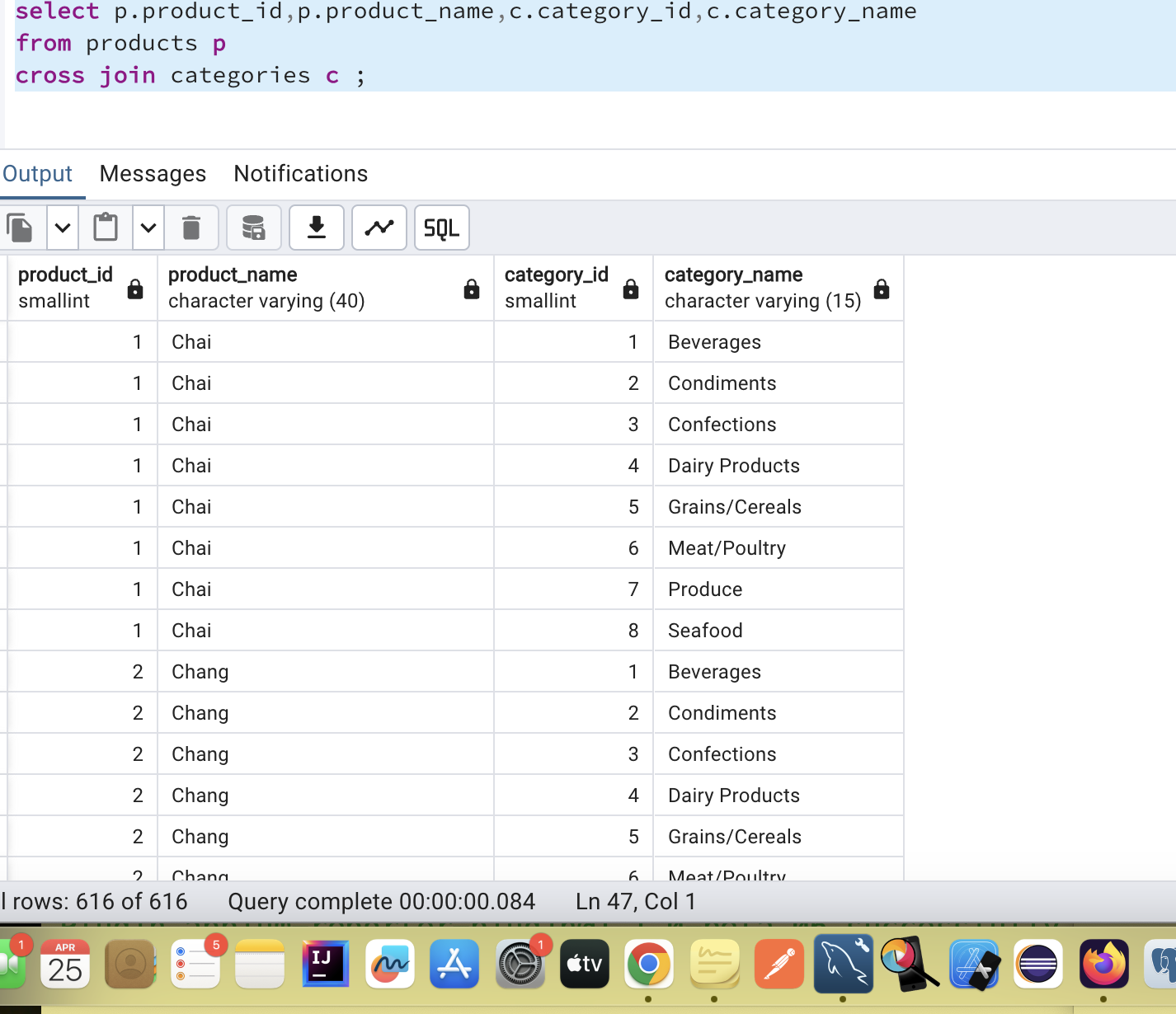
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5. Show all possible product and category combinations (Cross join).

select p.product\_id,p.product\_name,c.category\_id,c.category\_name

from products p

cross join categories c ;

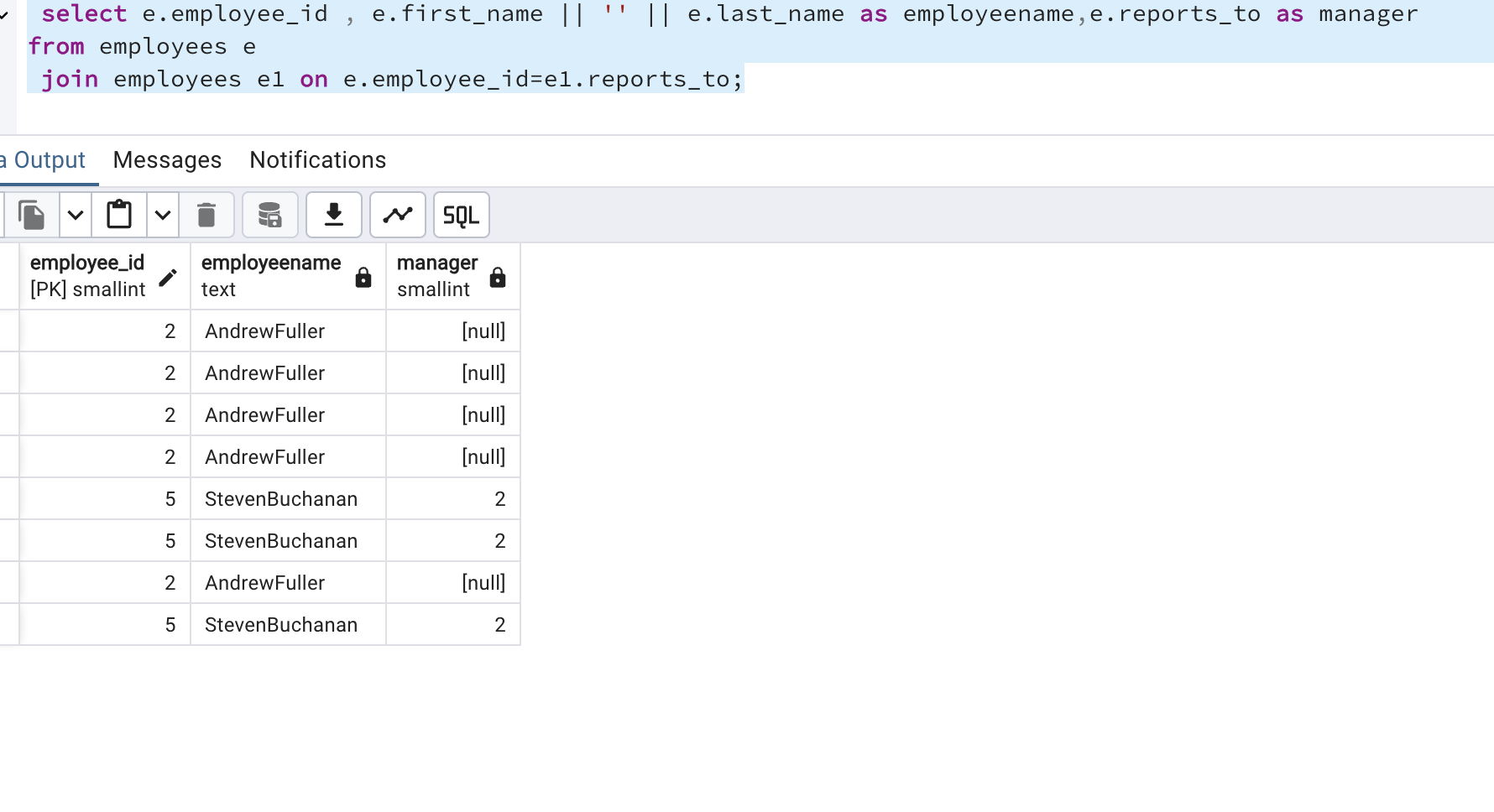


6. Show all employees who have the same manager(Self join)

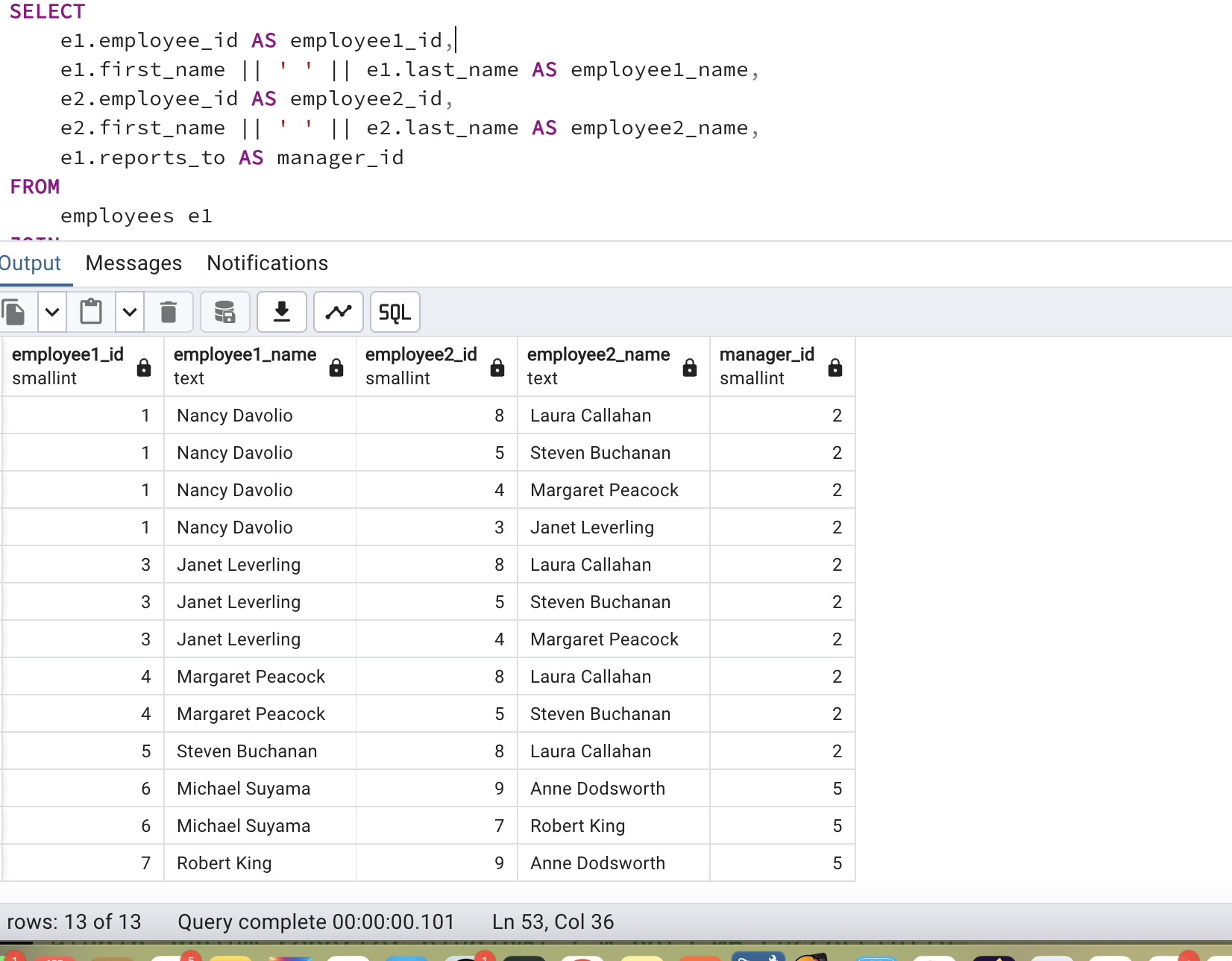
select e.employee\_id , e.first\_name || '' || e.last\_name as employeename,e.reports\_to as manager

from employees e

join employees e1 on e.employee\_id=e1.reports\_to;



Another way –



SELECT

e1.employee\_id AS employee1\_id,

e1.first\_name || ' ' || e1.last\_name AS employee1\_name,

e2.employee\_id AS employee2\_id,

e2.first\_name || ' ' || e2.last\_name AS employee2\_name,

e1.reports\_to AS manager\_id

FROM

employees e1

JOIN

employees e2 ON e1.reports\_to = e2.reports\_to

WHERE

e1.employee\_id < e2.employee\_id

AND e1.reports\_to IS NOT NULL;

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

**Tables used:** customers, orders

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

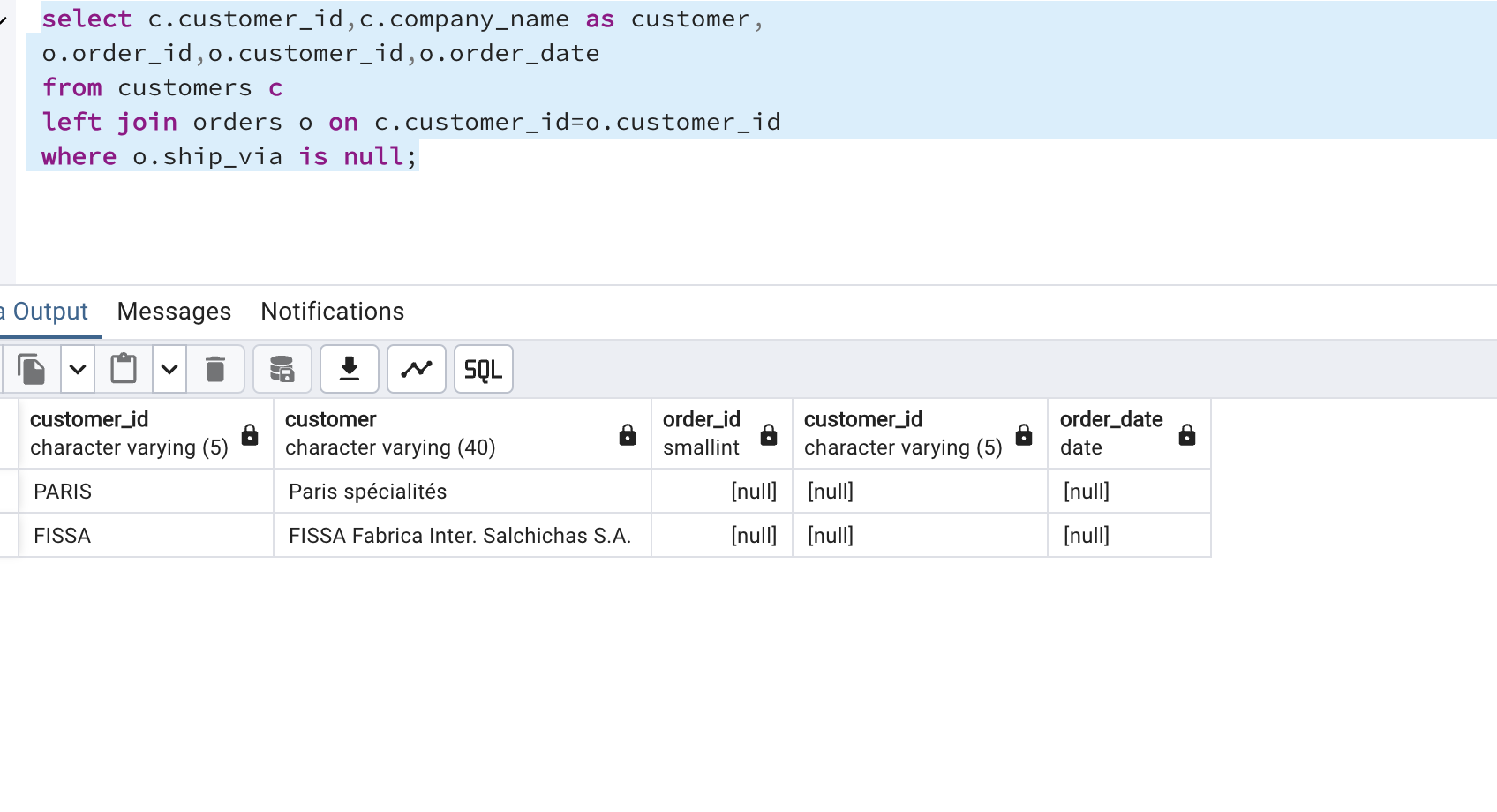
**select c.customer\_id,c.company\_name as customer,**

**o.order\_id,o.customer\_id,o.order\_date**

**from customers c**

**left join orders o on c.customer\_id=o.customer\_id**

**where o.ship\_via is null;**

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