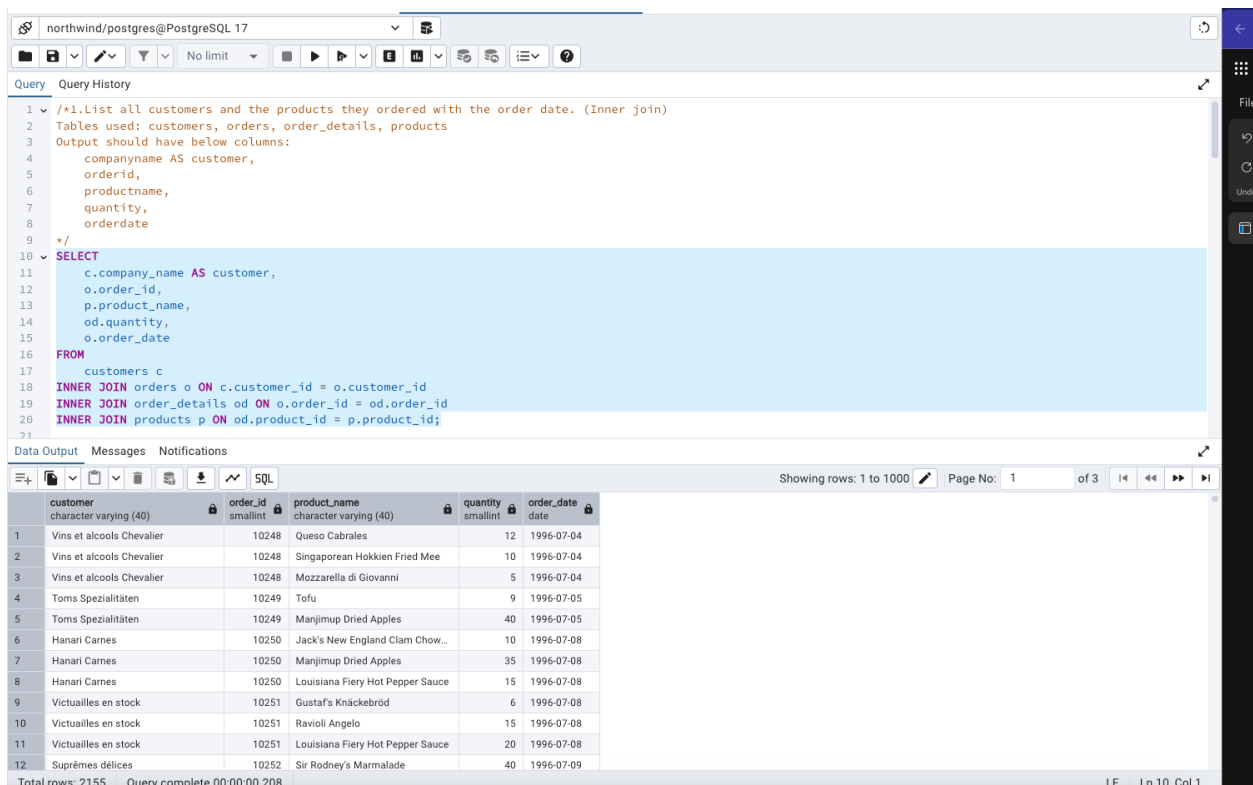


1. List all customers and the products they ordered with the order date.
(Inner join)

Tables used: customers, orders, order_details, products

Output should have below columns:

companyname AS customer,orderid, Productname, Quantity, Orderdate



The screenshot shows a PostgreSQL query editor interface. The query is as follows:

```
1 /*1.List all customers and the products they ordered with the order date. (Inner join)
2 Tables used: customers, orders, order_details, products
3 Output should have below columns:
4     companyname AS customer,
5     orderid,
6     productname,
7     quantity,
8     orderdate
9 */
10 SELECT
11     c.company_name AS customer,
12     o.order_id,
13     p.product_name,
14     od.quantity,
15     o.order_date
16 FROM
17     customers c
18 INNER JOIN orders o ON c.customer_id = o.customer_id
19 INNER JOIN order_details od ON o.order_id = od.order_id
20 INNER JOIN products p ON od.product_id = p.product_id;
```

The results are displayed in a table with the following columns: customer, order_id, product_name, quantity, and order_date. The table contains 12 rows of data.

	customer	order_id	product_name	quantity	order_date
1	Vins et alcools Chevalier	10248	Queso Cabrales	12	1996-07-04
2	Vins et alcools Chevalier	10248	Singaporean Hokkien Fried Mee	10	1996-07-04
3	Vins et alcools Chevalier	10248	Mozzarella di Giovanni	5	1996-07-04
4	Toms Spezialitäten	10249	Tofu	9	1996-07-05
5	Toms Spezialitäten	10249	Manjimup Dried Apples	40	1996-07-05
6	Hanari Carnes	10250	Jack's New England Clam Chow...	10	1996-07-08
7	Hanari Carnes	10250	Manjimup Dried Apples	35	1996-07-08
8	Hanari Carnes	10250	Louisiana Fiery Hot Pepper Sauce	15	1996-07-08
9	Victuailles en stock	10251	Gustaf's Knäckebröd	6	1996-07-08
10	Victuailles en stock	10251	Ravioli Angelo	15	1996-07-08
11	Victuailles en stock	10251	Louisiana Fiery Hot Pepper Sauce	20	1996-07-08
12	Suprêmes délices	10252	Sir Rodney's Marmalade	40	1996-07-09

Total rows: 2155 Query complete 00:00:00.208

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

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Query Query History

```

21
22 /*2.Show each order with customer, employee, shipper, and product info – even if some parts are missing. (Left Join)
23 Tables used: orders, customers, employees, shippers, order_details, products
24 */
25 SELECT
26     o.order_id,
27     c.company_name AS customer,
28     e.first_name || ' ' || e.last_name AS employee,
29     s.company_name AS shipper,
30     p.product_name,
31     od.quantity,
32     o.order_date
33 FROM
34     orders o
35 LEFT JOIN customers c ON o.customer_id = c.customer_id
36 LEFT JOIN employees e ON o.employee_id = e.employee_id
37 LEFT JOIN shippers s ON o.ship_via = s.shipper_id
38 LEFT JOIN order_details od ON o.order_id = od.order_id
39 LEFT JOIN products p ON od.product_id = p.product_id;
40
41 SELECT * from orders;

```

Data Output Messages Notifications

Showing rows: 1 to 1000 Page No: 1 of 3

	order_id smallint	customer character varying (40)	employee text	shipper character varying (40)	product_name character varying (40)	quantity smallint	order_date date
1	10248	Vins et alcools Chevalier	Steven Buchanan	Federal Shipping	Queso Cabrales	12	1996-07-04
2	10248	Vins et alcools Chevalier	Steven Buchanan	Federal Shipping	Singaporean Hokkien Fried Mee	10	1996-07-04
3	10248	Vins et alcools Chevalier	Steven Buchanan	Federal Shipping	Mozzarella di Giovanni	5	1996-07-04
4	10249	Toms Spezialitäten	Michael Suyama	Speedy Express	Tofu	9	1996-07-05
5	10249	Toms Spezialitäten	Michael Suyama	Speedy Express	Manjimup Dried Apples	40	1996-07-05
6	10250	Hanari Carnes	Margaret Peacock	United Package	Jack's New England Clam Chow...	10	1996-07-08
7	10250	Hanari Carnes	Margaret Peacock	United Package	Manjimup Dried Apples	35	1996-07-08
8	10250	Hanari Carnes	Margaret Peacock	United Package	Louisiana Fiery Hot Pepper Sauce	15	1996-07-08
9	10251	Victuailles en stock	Janet Leverling	Speedy Express	Gustaf's Knäckebröd	6	1996-07-08
10	10251	Victuailles en stock	Janet Leverling	Speedy Express	Ravioli Angelo	15	1996-07-08
11	10251	Victuailles en stock	Janet Leverling	Speedy Express	Louisiana Fiery Hot Pepper Sauce	20	1996-07-08
12	10252	Suprêmes délices	Margaret Peacock	United Package	Sir Rodney's Marmalade	40	1996-07-09

Total rows: 2155 Query complete 00:00:00.109 LF

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 History

```

39 LEFT JOIN products p ON od.product_id = p.product_id;
40
41 SELECT * from orders;
42
43 /*3.Show all order details and products (include all products even if they were never ordered). (Right Join)
44 Tables used: order_details, products
45 Output should have below columns:
46     orderid,
47     productid,|
48     quantity,
49     productname
50 */
51 SELECT
52     od.order_id,
53     p.product_id,
54     od.quantity,
55     p.product_name
56 FROM
57     order_details od
58 RIGHT JOIN products p ON od.product_id = p.product_id;
59

```

Data Output Messages Notifications

Showing rows: 1 to 1000 Page N

	order_id smallint	product_id smallint	quantity smallint	product_name character varying (40)
1	10248	11	12	Queso Cabrales
2	10248	42	10	Singaporean Hokkien Fried Mee
3	10248	72	5	Mozzarella di Giovanni
4	10249	14	9	Tofu
5	10249	51	40	Manjimup Dried Apples
6	10250	41	10	Jack's New England Clam Chow...
7	10250	51	35	Manjimup Dried Apples
8	10250	65	15	Louisiana Fiery Hot Pepper Sauce
9	10251	22	6	Gustaf's Knäckebröd
10	10251	57	15	Ravioli Angelo
11	10251	65	20	Louisiana Fiery Hot Pepper Sauce
12	10252	20	40	Sir Rodney's Marmalade

Total rows: 2155 Query complete 00:00:00.115

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

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Query History

```

53  p.product_id,
54  od.quantity,
55  p.product_name
56  FROM
57  order_details od
58  RIGHT JOIN products p ON od.product_id = p.product_id;
59
60  /*4.List all product categories and their products – including categories that have no products, and products that are not a
61  Tables used: categories, products
62  */
63  SELECT
64  c.category_id,
65  c.category_name,
66  p.product_id,
67  p.product_name
68  FROM
69  categories c
70  FULL OUTER JOIN products p ON c.category_id = p.category_id;
71
72  SELECT * FROM categories;
73

```

Data Output Messages Notifications

Showing rows: 1 to 77

	category_id smallint	category_name character varying (15)	product_id smallint	product_name character varying (40)
1	1	Beverages	1	Chai
2	1	Beverages	2	Chang
3	2	Condiments	3	Aniseed Syrup
4	2	Condiments	4	Chef Anton's Cajun Seasoning
5	2	Condiments	5	Chef Anton's Gumbo Mix
6	2	Condiments	6	Grandma's Boysenberry Spread
7	7	Produce	7	Uncle Bob's Organic Dried Pears
8	2	Condiments	8	Northwoods Cranberry Sauce
9	6	Meat/Poultry	9	Mishi Kobe Niku
10	8	Seafood	10	Ikura
11	4	Dairy Products	11	Queso Cabrales
12	4	Dairy Products	12	Queso Manchego La Pastora

Total rows: 77 Query complete 00:00:00.102

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

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Query Query History

```

63 SELECT
64     c.category_id,
65     c.category_name,
66     p.product_id,
67     p.product_name
68 FROM
69     categories c
70 FULL OUTER JOIN products p ON c.category_id = p.category_id;
71
72 SELECT * FROM categories;
73
74 /*5.Show all possible product and category combinations (Cross join).
75 */
76 SELECT
77     p.product_name,
78     c.category_name
79 FROM
80     products p
81 CROSS JOIN
82     categories c;
83

```

Data Output Messages Notifications

	product_name character varying (40)	category_name character varying (15)
2	Chai	Condiments
3	Chai	Confections
4	Chai	Dairy Products
5	Chai	Grains/Cereals
6	Chai	Meat/Poultry
7	Chai	Produce
8	Chai	Seafood
9	Chang	Beverages
10	Chang	Condiments
11	Chang	Confections
12	Chang	Dairy Products
13	Chang	Grains/Cereals

Total rows: 616 Query complete 00:00:00.215

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

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Query Query History

```

76 SELECT
77     p.product_name,
78     c.category_name
79 FROM
80     products p
81 CROSS JOIN
82     categories c;
83
84 /*6.Show all employees and their manager(Self join(left join))
85 */
86 SELECT
87     e.first_name AS employee_first_name,
88     e.last_name AS employee_last_name,
89     m.first_name AS manager_first_name,
90     m.last_name AS manager_last_name
91 FROM
92     employees e
93 LEFT JOIN
94     employees m ON e.reports_to = m.employee_id;
95
96 SELECT * FROM employees;

```

Data Output Messages Notifications

	employee_first_name character varying (10)	employee_last_name character varying (20)	manager_first_name character varying (10)	manager_last_name character varying (20)
1	Nancy	Davolio	Andrew	Fuller
2	Andrew	Fuller	[null]	[null]
3	Janet	Leverling	Andrew	Fuller
4	Margaret	Peacock	Andrew	Fuller
5	Steven	Buchanan	Andrew	Fuller
6	Michael	Suyama	Steven	Buchanan
7	Robert	King	Steven	Buchanan
8	Laura	Callahan	Andrew	Fuller
9	Anne	Dodsworth	Steven	Buchanan

Total rows: 9 Query complete 00:00:00.141

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

Tables used: customers, orders

(Left Join, WHERE o.shipvia IS NULL)

