DAY 4 Assignments

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

   select c.company_name as customers, 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;

```
1    /* Day4 - Assignment */
2
3    /* Q1. List all customers and the products they ordered with the order date.*/
4    /*Tables used: customers, orders, order_details, products*/
5
6  ∨ select c.company_name as customers, o.order_id, p.product_name, od.quantity, o.order_date
7    from customers c
8    inner join orders o  on c.customer_id = o.customer_id
9    inner join order_details od on o.order_id = od.order_id
10   inner join products p on od.product_id = p.product_id;
11
```

Data Output   Messages   Notifications

	customers character varying (40)	order_id smallint	product_name character varying (40)	quantity smallint	order_date date
1	Toms Spezialitäten	10249	Tofu	9	1996-07-05
2	Toms Spezialitäten	10249	Manjimup Dried Apples	40	1996-07-05
3	Hanari Carnes	10250	Jack's New England Clam Chow...	10	1996-07-08
4	Hanari Carnes	10250	Manjimup Dried Apples	35	1996-07-08
5	Hanari Carnes	10250	Louisiana Fiery Hot Pepper Sauce	15	1996-07-08
6	Victuailles en stock	10251	Gustaf's Knäckebröd	6	1996-07-08
7	Victuailles en stock	10251	Ravioli Angelo	15	1996-07-08
8	Victuailles en stock	10251	Louisiana Fiery Hot Pepper Sauce	20	1996-07-08
9	Suprêmes délices	10252	Geitost	25	1996-07-09
10	Suprêmes délices	10252	Camembert Pierrot	40	1996-07-09
11	Hanari Carnes	10253	Gorgonzola Telino	20	1996-07-10

Total rows: 1811   Query complete 00:00:00.452

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

```
select o.order_id,
c.company_name as customer,
concat(e.first_name, ' ', e.last_name) as employee_name,
s.company_name as shipper, p.product_name
from products p
left join order_details od on p.product_id = od.product_id
left join orders o on od.order_id = o.order_id
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;
```

Query   Query History

```
13    /* 2.Show each order with customer, employee, shipper, and product info — even if some parts are missing.*/
14    /*Tables used: orders, customers, employees, shippers, order_details, products*/
15 ∨  select o.order_id,
16    c.company_name as customer,
17    concat(e.first_name, ' ', e.last_name) as employee_name,
18    s.company_name as shipper, p.product_name
19    from products p
20    left join order_details od on p.product_id = od.product_id
21    left join orders o on od.order_id = o.order_id
22    left join customers c on o.customer_id = c.customer_id
23    left join employees e on o.employee_id = e.employee_id
24    left join shippers s on o.ship_via = s.shipper_id;
```

Data Output   Messages   Notifications

Showing rows: 1 to

	order_id smallint	customer character varying (40)	employee_name text	shipper character varying (40)	product_name character varying (40)
1	10248	[null]	Steven Buchanan	Federal Shipping	Queso Cabrales
2	10248	[null]	Steven Buchanan	Federal Shipping	Singaporean Hokkien Fried Mee
3	10248	[null]	Steven Buchanan	Federal Shipping	Mozzarella di Giovanni
4	10249	Toms Spezialitäten	Michael Suyama	Speedy Express	Tofu
5	10249	Toms Spezialitäten	Michael Suyama	Speedy Express	Manjimup Dried Apples
6	10250	Hanari Carnes	Margaret Peacock	United Package	Jack's New England Clam Chow…
7	10250	Hanari Carnes	Margaret Peacock	United Package	Manjimup Dried Apples
8	10250	Hanari Carnes	Margaret Peacock	United Package	Louisiana Fiery Hot Pepper Sauce
9	10251	Victuailles en stock	Janet Leverling	Speedy Express	Gustaf's Knäckebröd
10	10251	Victuailles en stock	Janet Leverling	Speedy Express	Ravioli Angelo

Total rows: 1824   Query complete 00:00:01.995

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

select od.order_id, od.product_id, od.quantity, p.product_name
from order_details od
right join products p on od.product_id =p.product_id
order by 1 Nulls First;

Query   Query History

```
26
27    /* 3.Show all order details and products (include all products even if they were never ordered)*/
28    /*Tables used: order_details, products*/
29
30 ∨  select od.order_id, od.product_id, od.quantity, p.product_name
31    from order_details od
32    right join products p on od.product_id =p.product_id
33    order by 1 Nulls First;
```

Data Output   Messages   Notifications

Showing rows: 1 to

	order_id smallint	product_id smallint	quantity smallint	product_name character varying (40)
1	[null]	[null]	[null]	Savory Fire Sauce
2	[null]	[null]	[null]	Midnight Mango Fizz
3	[null]	[null]	[null]	White Bread
4	10248	11	12	Queso Cabrales
5	10248	72	5	Mozzarella di Giovanni
6	10248	42	10	Singaporean Hokkien Fried Mee
7	10249	14	9	Tofu
8	10249	51	40	Manjimup Dried Apples
9	10250	65	15	Louisiana Fiery Hot Pepper Sauce
10	10250	41	10	Jack's New England Clam Chow...
11	10250	51	35	Manjimup Dried Apples
12	10251	22	6	Gustaf's Knäckebröd
13	10251	57	15	Ravioli Angelo

Total rows: 1824   Query complete 00:00:00.256

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)**

```
select p.product_name, ca.category_name
from products p
full outer join categories ca on ca.category_id = p.category_id;
```

```
34
35   /* 4.List all product categories and their products — including categories that have no products, and products that are
36   /*Tables used: categories, products*/
37
38 ∨ select p.product_name, ca.category_name
39   from products p
40   full outer join categories ca on ca.category_id = p.category_id;
41
```

Data Output   Messages   Notifications

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

Total rows: 67   Query complete 00:00:00.131

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

select p.product_name, ca.category_name
from products p
cross join categories ca;

Query   Query History

```
41
42
43     /* 5.Show all possible product and category combinations */
44
45 v   select p.product_name, ca.category_name
46     from products p
47     cross join categories ca;
48
49
```

Data Output   Messages   Notifications

	product_name character varying (40) 🔒	category_name character varying (15) 🔒
1	Aniseed Syrup	Condiments
2	Aniseed Syrup	Dairy Products
3	Aniseed Syrup	Grains/Cereals
4	Aniseed Syrup	Meat/Poultry
5	Aniseed Syrup	Produce
6	Aniseed Syrup	Seafood
7	Aniseed Syrup	Drinks
8	Aniseed Syrup	Bread Products
9	Aniseed Syrup	Beverages
10	Chef Anton's Cajun Seasoning	Condiments
11	Chef Anton's Cajun Seasoning	Dairy Products
12	Chef Anton's Cajun Seasoning	Grains/Cereals
13	Chef Anton's Cajun Seasoning	Meat/Poultry

Total rows: 603   Query complete 00:00:00.273

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

select concat(E1.first_name, ' ' , E1.last_name) as employee_name,
  concat(E2.first_name, ' ' , E2.last_name) as manager_name
  from employees E1
  inner join employees E2 on E1.reports_to =E2.employee_id
  where E1.employee_id!= E2.employee_id;

Query Query History

```
49
50    /* 6.Show all employees who have the same manager */
51
52 v  select concat(E1.first_name, ' ' , E1.last_name) as employee_name,
53           concat(E2.first_name, ' ' , E2.last_name) as manager_name
54           from employees E1
55           inner join employees E2 on E1.reports_to =E2.employee_id
56           where E1.employee_id!= E2.employee_id;
```

Data Output   Messages   Notifications

	employee_name text	manager_name text
1	Nancy Davolio	Andrew Fuller
2	Janet Leverling	Andrew Fuller
3	Margaret Peacock	Andrew Fuller
4	Steven Buchanan	Andrew Fuller
5	Michael Suyama	Steven Buchanan
6	Robert King	Steven Buchanan
7	Laura Callahan	Andrew Fuller
8	Anne Dodsworth	Steven Buchanan

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

select cu.customer_id, cu.company_name as Customers, o.order_id, o.ship_via
from customers cu
left join orders o on cu.customer_id = o.customer_id
where o.ship_via is Null;

Query   Query History

```
59    /* 7.List all customers who have not selected a shipping method */
60    /*Tables used: customers, orders*/
61
62  ∨ select cu.customer_id, cu.company_name as Customers, o.order_id, o.ship_via
63    from customers cu
64    left join orders o on cu.customer_id = o.customer_id
65    where o.ship_via is Null;
66
```

Data Output   Messages   Notifications

	customer_id character varying (5) 🔒	customers character varying (40) 🔒	order_id smallint 🔒	ship_via smallint 🔒
1	PARIS	Paris spécialités	[null]	[null]
2	FISSA	FISSA Fabrica Inter. Salchichas S.A.	[null]	[null]