

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;
```

19	
20	/* 1.List all customers and the products they ordered with the order date.(Inner join)*/
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22	select c.company_name as customers, o.order_id, p.product_name, od.quantity, o.order_date
23	from customers c
24	inner join orders o on c.customer_id = o.customer_id
25	inner join order_details od on o.order_id = od.order_id
26	inner join products p on od.product_id = p.product_id;
27	
28	

Data Output
Messages
Notifications

	customers character varying (40)	order_id smallint	product_name character varying (40)	quantity smallint	order_date 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
13	Suprêmes délices	10252	Geitost	25	1996-07-09
14	Suprêmes délices	10252	Camembert Pierrot	40	1996-07-09
15	Hanari Carnes	10253	Gorgonzola Telino	20	1996-07-10
16	Hanari Carnes	10253	Chartreuse verte	42	1996-07-10
17	Hanari Carnes	10253	Maxilaku	40	1996-07-10
Total rows: 2155		Query complete 00:00:00.115			

```
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;
```

Data Output Messages Notifications

Total rows: 2155 Query complete 00:00:00.177

```
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 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 1 Nulls First;
```

```
20 /* 2.Show each order with customer, employee, shipper, and
21 product info – even if some parts are missing. (Left Join)*/
22
23 select o.order_id, c.company_name as customer,
24 concat(e.first_name, ' ', e.last_name) as employee_name,
25 s.company_name as shipper, p.product_name
26 from orders o
27 left join customers c on o.customer_id = c.customer_id
28 left join employees e on o.employee_id = e.employee_id
29 left join shippers s on o.ship_via = s.shipper_id
30 left join order_details od on o.order_id = od.order_id
31 left join products p on od.product_id = p.product_id
32 order by 1 Nulls First;
```

Data OutputMessagesNotifications

SQL

	order_id smallint	customer character varying (40)	employee_name text	shipper character varying (40)	product_name character varying (40)
1	10248	Vins et alcools Chevalier	Steven Buchanan	Federal Shipping	Queso Cabrales
2	10248	Vins et alcools Chevalier	Steven Buchanan	Federal Shipping	Singaporean Hokkien Fried Mee
3	10248	Vins et alcools Chevalier	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
11	10251	Victuailles en stock	Janet Leverling	Speedy Express	Louisiana Fiery Hot Pepper Sauce
12	10252	Suprêmes délices	Margaret Peacock	United Package	Sir Rodney's Marmalade
13	10252	Suprêmes délices	Margaret Peacock	United Package	Geitost
14	10252	Suprêmes délices	Margaret Peacock	United Package	Camembert Pierrot
15	10253	Hanari Carnes	Janet Leverling	United Package	Gorgonzola Telino
16	10253	Hanari Carnes	Janet Leverling	United Package	Chartreuse verte
17	10253	Hanari Carnes	Janet Leverling	United Package	Maxilaku













Total rows: 2155Query complete 00:00:00.098

3. Show all order details and products (include 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;
```

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;
```

46	▼	/* 4.List all product categories and their products –																																																																		
47		including categories that have no products,																																																																		
48		and products that are not assigned to any category.(Outer Join)*/																																																																		
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Data Output Messages Notifications																																																																				
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		<table><thead><tr><th></th><th>product_name character varying (40) </th><th>category_name character varying (15) </th></tr></thead><tbody><tr><td>1</td><td>Chai</td><td>Beverages</td></tr><tr><td>2</td><td>Chang</td><td>Beverages</td></tr><tr><td>3</td><td>Aniseed Syrup</td><td>Condiments</td></tr><tr><td>4</td><td>Chef Anton's Cajun Seasoning</td><td>Condiments</td></tr><tr><td>5</td><td>Chef Anton's Gumbo Mix</td><td>Condiments</td></tr><tr><td>6</td><td>Grandma's Boysenberry Spread</td><td>Condiments</td></tr><tr><td>7</td><td>Uncle Bob's Organic Dried Pears</td><td>Produce</td></tr><tr><td>8</td><td>Northwoods Cranberry Sauce</td><td>Condiments</td></tr><tr><td>9</td><td>Mishi Kobe Niku</td><td>Meat/Poultry</td></tr><tr><td>10</td><td>Ikura</td><td>Seafood</td></tr><tr><td>11</td><td>Queso Cabrales</td><td>Dairy Products</td></tr><tr><td>12</td><td>Queso Manchego La Pastora</td><td>Dairy Products</td></tr><tr><td>13</td><td>Konbu</td><td>Seafood</td></tr><tr><td>14</td><td>Tofu</td><td>Produce</td></tr><tr><td>15</td><td>Genen Shouyu</td><td>Condiments</td></tr><tr><td>16</td><td>Pavlova</td><td>Confections</td></tr><tr><td>17</td><td>Alice Mutton</td><td>Meat/Poultry</td></tr><tr><td>18</td><td>Carnarvon Tigers</td><td>Seafood</td></tr><tr><td>19</td><td>Teatime Chocolate Biscuits</td><td>Confections</td></tr><tr><td>20</td><td>Sir Rodney's Marmalade</td><td>Confections</td></tr><tr><td>21</td><td>Sir Rodney's Scones</td><td>Confections</td></tr></tbody></table>		product_name character varying (40) 	category_name character varying (15) 	1	Chai	Beverages	2	Chang	Beverages	3	Aniseed Syrup	Condiments	4	Chef Anton's Cajun Seasoning	Condiments	5	Chef Anton's Gumbo Mix	Condiments	6	Grandma's Boysenberry Spread	Condiments	7	Uncle Bob's Organic Dried Pears	Produce	8	Northwoods Cranberry Sauce	Condiments	9	Mishi Kobe Niku	Meat/Poultry	10	Ikura	Seafood	11	Queso Cabrales	Dairy Products	12	Queso Manchego La Pastora	Dairy Products	13	Konbu	Seafood	14	Tofu	Produce	15	Genen Shouyu	Condiments	16	Pavlova	Confections	17	Alice Mutton	Meat/Poultry	18	Carnarvon Tigers	Seafood	19	Teatime Chocolate Biscuits	Confections	20	Sir Rodney's Marmalade	Confections	21	Sir Rodney's Scones	Confections
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Total rows: 77 Query complete 00:00:00.102																																																																				

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

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

```
56 /* 5.Show all possible product and category combinations (Cross join).*/
57
58 select p.product_name, ca.category_name
59 from products p
60 cross join categories ca;
61
62
```

Data OutputMessagesNotifications

SQL

	product_name character varying (40)	category_name character varying (15)
1	Chai	Beverages
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
14	Chang	Meat/Poultry
15	Chang	Produce
16	Chang	Seafood
17	Aniseed Syrup	Beverages
18	Aniseed Syrup	Condiments
19	Aniseed Syrup	Confections
20	Aniseed Syrup	Dairy Products
21	Aniseed Syrup	Grains/Cereals

Total rows: 616Query complete 00:00:00.093

6. Show all employees who have the same manager(Self 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;
```

```
64  /* 6.Show all employees who have the same manager(Self join).*/  
65  
66  select concat(E1.first_name, ' ', E1.last_name) as employee_name,  
67         concat(E2.first_name, ' ', E2.last_name) as manager_name  
68         from employees E1  
69         inner join employees E2 on E1.reports_to =E2.employee_id  
70         where E1.employee_id!= E2.employee_id;  
71  
72  
73
```

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

Total rows: 8 Query complete 00:00:00.105

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;
```

```
71  /* 6.Show all employees who have the same manager(Self join).*/
72
73  select concat(E1.first_name, ' ' , E1.last_name) as employee_name,
74         concat(E2.first_name, ' ' , E2.last_name) as manager_name
75         from employees E1
76         inner join employees E2 on E1.reports_to =E2.employee_id
77         where E1.employee_id!= E2.employee_id;
78
79
80  /* 7.List all customers who have not selected a shipping method. */
81
82  select cu.customer_id, cu.company_name as Customers, o.order_id, o.ship_via
83         from customers cu
84         left join orders o on cu.customer_id = o.customer_id
85         where o.ship_via is Null;
86
87
```

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]

Total rows: 2 Query complete 00:00:00.090