## **Day2 Assignments**

- 1) Alter Table:
- Add a new column linkedin\_profile to employees table to store LinkedIn URLs as varchar.

### Alter table if exists employees

### Add column linkedin\_profile varchar(100);



Change the linkedin\_profile column data type from VARCHAR to TEXT.

#### Alter table employees

## Alter column linkedin\_profile Set Data Type TEXT;



• Add unique, not null constraint to linkedin\_profile

### Alter table employees

### Add Constraint distinct\_name UNIQUE (linkedin\_profile);



### Alter table employees

### Alter column linkedin\_profile Set Not Null;

```
Data Output Messages Notifications

ERROR: column "linkedin_profile" of relation "employees" contains null values

SQL state: 23502
```

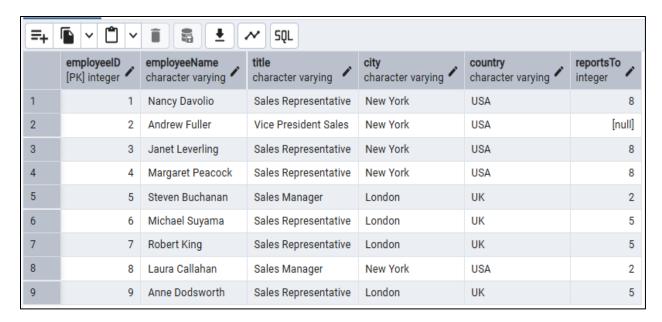
Drop column linkedin\_profile

### Alter table employees

### Drop column linkedin\_profile;



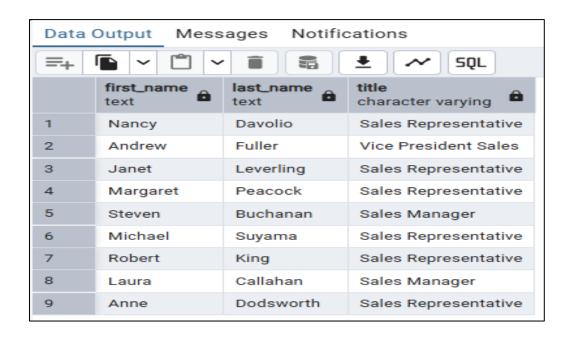
Employee table after dropping the linkedin\_profile column is below:



### 2) Querying (Select)

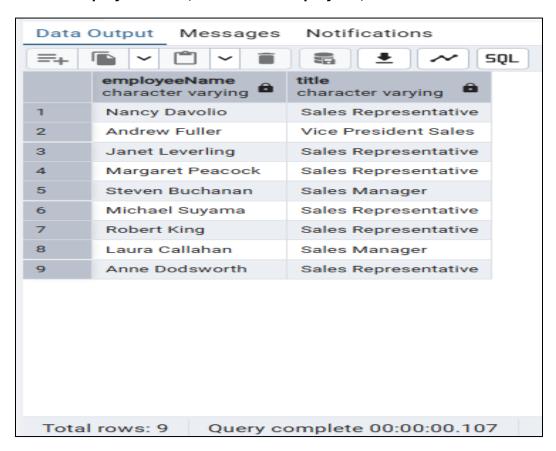
• Retrieve the first name, last name, and title of all employees

```
select
   split_part("employeeName", ' ', 1) as first_name,
   split_part("employeeName", ' ', 2) as last_name,
   title
from employees;
```



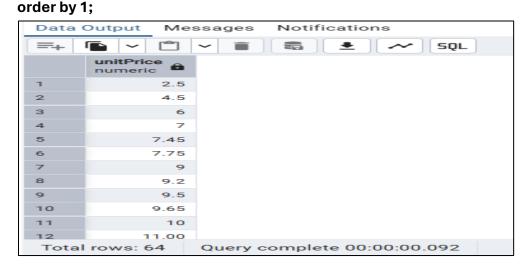
• Retrieve the employee's name, and title of all employees

### select "employeeName", "title" from employees;



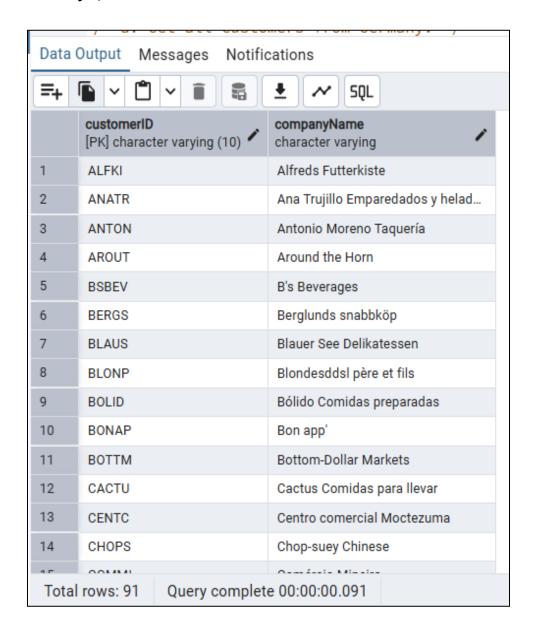
• Find all unique unit prices of products

# select distinct "unitPrice" from products

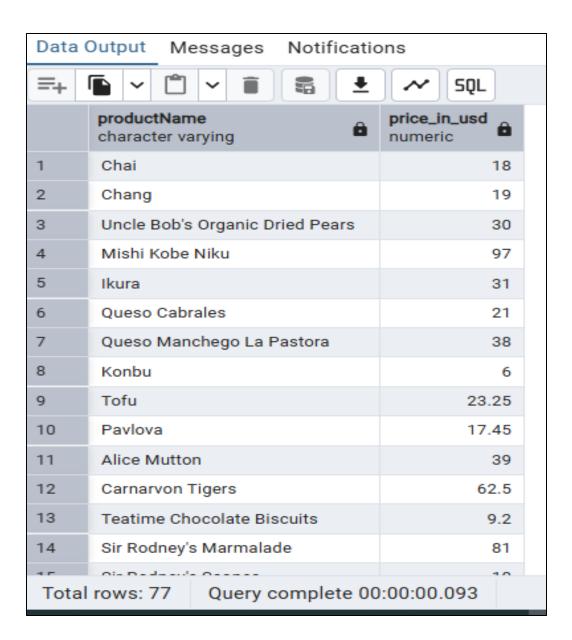


• List all customers sorted by company name in ascending order

select "customerID", "companyName" from customers order by 2;



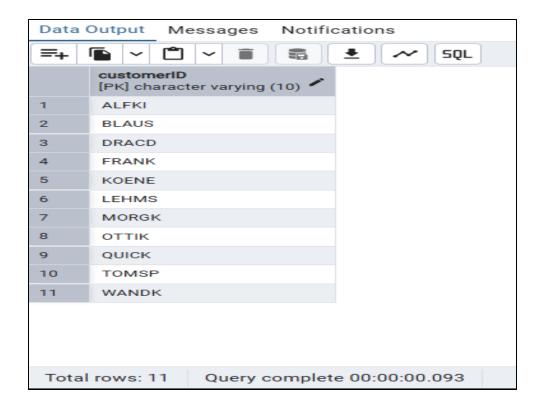
Display product name and unit price, but rename the unit\_price column as price\_in\_usd
 select "productName", "unitPrice" as price\_in\_usd
 from products;



### 3) Filtering

Get all customers from Germany.

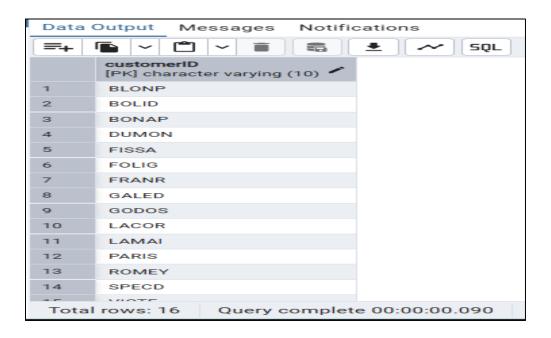
select "customerID"
from customers
where "country" = 'Germany';



• Find all customers from France or Spain

select "customerID" from customers

where "country" = 'France' or "country" = 'Spain';



• Retrieve all orders placed in 2014 (based on order\_date), and either have freight greater than 50 or the shipped date available (i.e., non-NULL) (Hint: EXTRACT(YEAR FROM order\_date))

select \* from orders where extract("Year" from "orderDate") = '2014 and ("freight" > 50 or "shippedDate" is Not Null);

Data (	Data Output Messages Notifications								
<b>=</b> +	<u> </u>		SQL						
	orderID [PK] integer	customerID character varying (10)	employeeID integer	orderDate date	requiredDate date	shippedDate date	shipperID integer	freight numeric	
1	10400	EASTC	1	2014-01-01	2014-01-29	2014-01-16	3	83.93	
2	10401	RATTC	1	2014-01-01	2014-01-29	2014-01-10	1	12.51	
3	10402	ERNSH	8	2014-01-02	2014-02-13	2014-01-10	2	67.88	
4	10403	ERNSH	4	2014-01-03	2014-01-31	2014-01-09	3	73.79	
5	10404	MAGAA	2	2014-01-03	2014-01-31	2014-01-08	1	155.97	
6	10405	LINOD	1	2014-01-06	2014-02-03	2014-01-22	1	34.82	
7	10406	QUEEN	7	2014-01-07	2014-02-18	2014-01-13	1	108.04	
8	10407	OTTIK	2	2014-01-07	2014-02-04	2014-01-30	2	91.48	
9	10408	FOLIG	8	2014-01-08	2014-02-05	2014-01-14	1	11.26	
10	10409	OCEAN	3	2014-01-09	2014-02-06	2014-01-14	1	29.83	
11	10410	BOTTM	3	2014-01-10	2014-02-07	2014-01-15	3	2.4	
12	10411	BOTTM	9	2014-01-10	2014-02-07	2014-01-21	3	23.65	
13	10412	WARTH	8	2014-01-13	2014-02-10	2014-01-15	2	3.77	
14	10413	LAMAI	3	2014-01-14	2014-02-11	2014-01-16	2	95.66	
15	10414	FAMIA	2	2014-01-14	2014-02-11	2014-01-17	3	21.48	
16	10415	HUNGC	3	2014-01-15	2014-02-12	2014-01-24	1	0.2	
Total	rows: 408	Query complete 00:00:00	0.272						

### 4) Filtering

• Retrieve the product\_id, product\_name, and unit\_price of products where the unit\_price is greater than 15.

select "productID", "productName", "unitPrice" from products where "unitPrice" > 15 order by "unitPrice";

Data	Data Output Messages Notifications						
=+	=+ <b>□</b> ∨ <b>□</b> ∨ <b>□ □ □ □ □ □ □ □ □ □</b>						
	productID [PK] integer	,	productName character varying	unitPrice numeric			
1	5	0	Valkoinen suklaa	16.25			
2	1	5	Genen Shouyu	17.050			
3	1	6	Pavlova	17.45			
4	3	5	Steeleye Stout	18			
5	7	6	Lakkaliköri	18			
6		1	Chai	18			
7	39		Chartreuse verte	18			
8	40		Boston Crab Meat	18.4			
9	6	6	Louisiana Hot Spiced Okra	18.70			
10	3	6	Inlagd Sill	19			
11		2	Chang	19			
12	5	7	Ravioli Angelo	19.5			
13	4	19	Maxilaku	20			
14	2	22	Gustaf's Knackebröd	21			
15	11		Queso Cabrales	21			
16	44		Gula Malacca	21.3950			
17	71		Flotemysost	21.5			
18	65 Louisiana Fiery Hot Pepper Sauce 23.1550						
Total	Total rows: 51 Query complete 00:00:00.097						

• List all employees who are in the USA and have the title "Sales Representative".

select \* from employees
where "country" = 'USA' and "title" = 'Sales Representative';



• Retrieve all products that are not discontinued and priced greater than 30.

# select \* from products where "discontinued" = 0 and "unitPrice" > 30;

Data	Data Output Messages Notifications							
=+		~	Squ     Squ					
	productID [PK] integer	,	productName character varying	quantityPerUnit character varying	unitPrice numeric	discontinued integer	categoryID integer	
1		10	Ikura	12 - 200 ml jars	31	0	8	
2		12	Queso Manchego La Pastora	10 - 500 g pkgs.	38	0	4	
3		18	Carnarvon Tigers	16 kg pkg.	62.5	0	8	
4		20	Sir Rodney's Marmalade	30 gift boxes	81	0	3	
5		26	Gumbär Gummibärchen	100 - 250 g bags	31.23	0	3	
6		27	Schoggi Schokolade	100 - 100 g pieces	43.9	0	3	
7		32	Mascarpone Fabioli	24 - 200 g pkgs.	32	0	4	
8		38	Côte de Blaye	12 - 75 cl bottles	263.5	0	1	
9		43	Ipoh Coffee	16 - 500 g tins	46	0	1	
10		51	Manjimup Dried Apples	50 - 300 g pkgs.	53	0	7	
11		56	Gnocchi di nonna Alice	24 - 250 g pkgs.	38	0	5	
12		59	Raclette Courdavault	5 kg pkg.	55	0	4	
13		60	Camembert Pierrot	15 - 300 g rounds	34	0	4	
14		62	Tarte au sucre	48 pies	49.3	0	3	
15		64	Wimmers gute Semmelknö	20 bags x 4 pieces	33.25	0	5	
16		69	Gudbrandsdalsost	10 kg pkg.	36	0	4	
17		72	Mozzarella di Giovanni	24 - 200 g pkgs.	34.8	0	4	
18		8	Northwoods Cranberry Sauce	12 - 12 oz jars	44.00	0	2	
Tota	Total rows: 20 Query complete 00:00:00.101							

### 5) LIMIT/FETCH

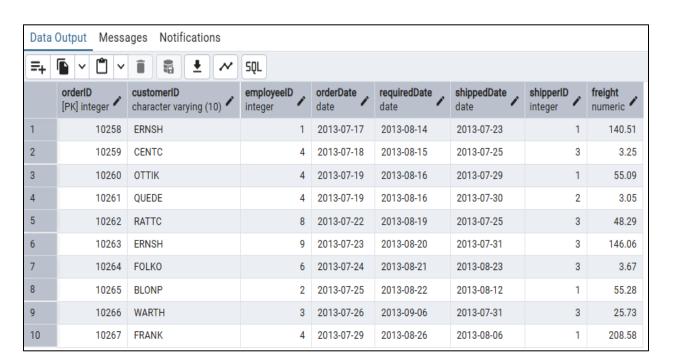
• Retrieve the first 10 orders from the orders table.

# select \* from orders limit 10;

Data	Data Output Messages Notifications									
<b>#</b>	+ 🖺 🗸 🖺 🗸 SQL									
	orderID [PK] integer	customerID character varying (10)	employeeID integer	orderDate date	requiredDate date	shippedDate date	shipperID integer	freight numeric		
1	10248	VINET	5	2013-07-04	2013-08-01	2013-07-16	3	32.38		
2	10249	TOMSP	6	2013-07-05	2013-08-16	2013-07-10	1	11.61		
3	10250	HANAR	4	2013-07-08	2013-08-05	2013-07-12	2	65.83		
4	10251	VICTE	3	2013-07-08	2013-08-05	2013-07-15	1	41.34		
5	10252	SUPRD	4	2013-07-09	2013-08-06	2013-07-11	2	51.3		
6	10253	HANAR	3	2013-07-10	2013-07-24	2013-07-16	2	58.17		
7	10254	CHOPS	5	2013-07-11	2013-08-08	2013-07-23	2	22.98		
8	10255	RICSU	9	2013-07-12	2013-08-09	2013-07-15	3	148.33		
9	10256	WELLI	3	2013-07-15	2013-08-12	2013-07-17	2	13.97		
10	10257	HILAA	4	2013-07-16	2013-08-13	2013-07-22	3	81.91		

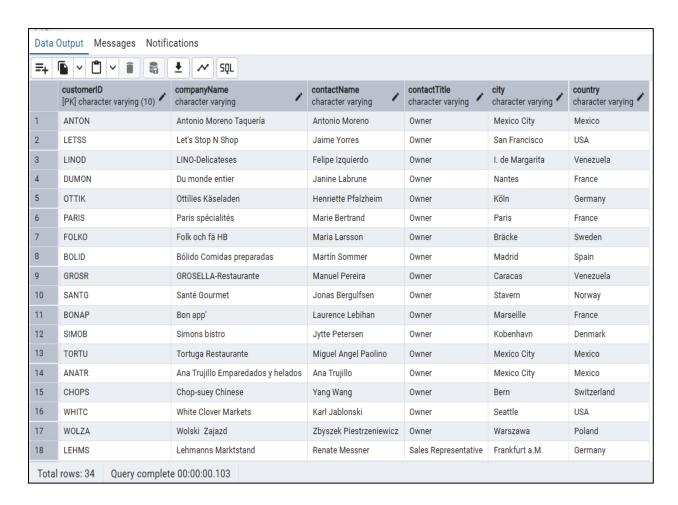
● Retrieve orders starting from the 11th order, fetching 10 rows (i.e., fetch rows 11-20).

# select \* from orders limit 10 offset 10;



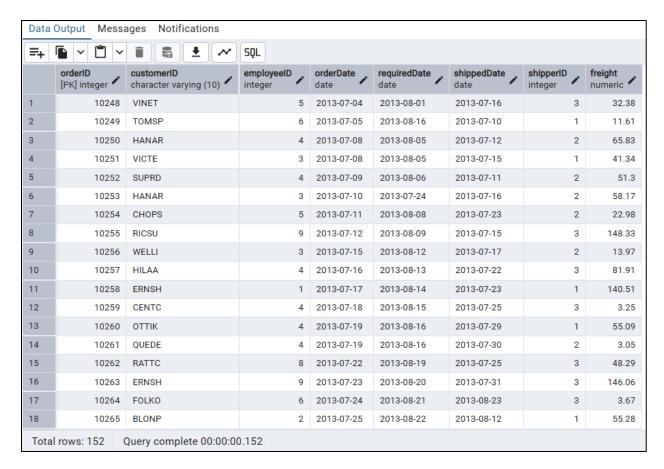
- 6) Filtering (IN, BETWEEN)
- List all customers who are either Sales Representative or Owner

select \* from customers
where "contactTitle" = 'Sales Representative' or "contactTitle" = 'Owner'
order by "contactTitle";



• Retrieve orders placed between January 1, 2013, and December 31, 2013.

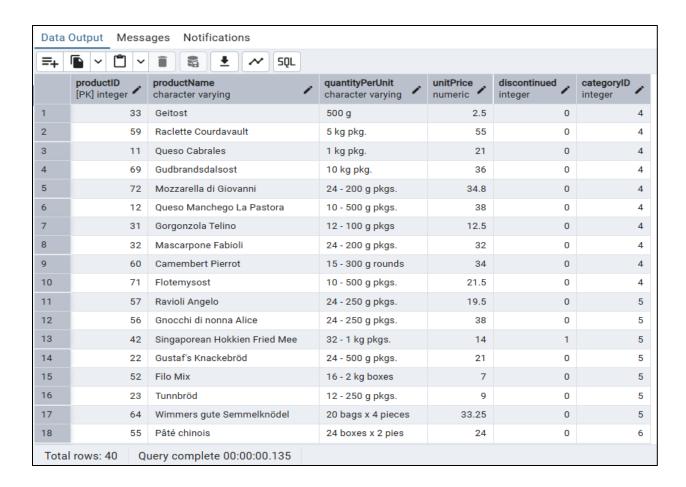
select \* from orders where "orderDate" between '2013-01-1' and '2013-12-31';



### 7) Filtering

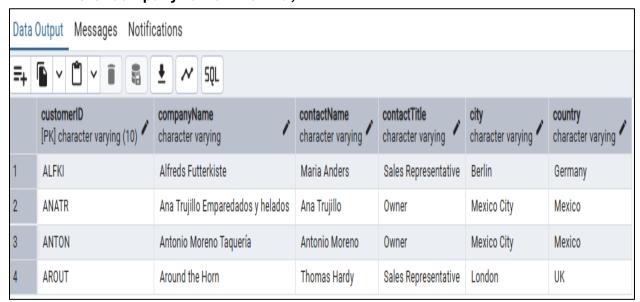
• List all products whose category\_id is not 1, 2, or 3.

select \* from products where "categoryID" not in (1, 2, 3) order by "categoryID";



• Find customers whose company name starts with "A".

# select \* from customers where "companyName" like 'A%';



## 8) INSERT into orders table:

Task: Add a new order to the orders table with the following details:

Order ID: 11078

Customer ID: ALFKI

Employee ID: 5

Order Date: 2025-04-23

Required Date: 2025-04-30

Shipped Date: 2025-04-25

shipperID:2

Freight: 45.50

Insert into orders values(11078,'ALFKI', 5, '2025-04-23', '2025-04-30','2025-04-25', 2, 45.50)

## select \* from orders order by 1 desc:

	order by 1 desc;								
Data	Data Output Messages Notifications								
<b>=</b> +	<b>□</b> ∨ □ ∨		SQL						
	orderID [PK] integer	customerID character varying (10)	employeeID integer	orderDate date	requiredDate date	shippedDate date	shipperID integer	freight numeric	
1	11078	ALFKI	5	2025-04-23	2025-04-30	2025-04-25	2	45.50	
2	11077	RATTC	1	2015-05-06	2015-06-03	[null]	2	8.53	
3	11076	BONAP	4	2015-05-06	2015-06-03	[null]	2	38.28	
4	11075	RICSU	8	2015-05-06	2015-06-03	[null]	2	6.19	
5	11074	SIMOB	7	2015-05-06	2015-06-03	[null]	2	18.44	
6	11073	PERIC	2	2015-05-05	2015-06-02	[null]	2	24.95	
7	11072	ERNSH	4	2015-05-05	2015-06-02	[null]	2	258.64	
8	11071	LILAS	1	2015-05-05	2015-06-02	[null]	1	0.93	
9	11070	LEHMS	2	2015-05-05	2015-06-02	[null]	1	136	
10	11069	TORTU	1	2015-05-04	2015-06-01	2015-05-06	2	15.67	
11	11068	QUEEN	8	2015-05-04	2015-06-01	[null]	2	81.75	
12	11067	DRACD	1	2015-05-04	2015-05-18	2015-05-06	2	7.98	
13	11066	WHITC	7	2015-05-01	2015-05-29	2015-05-04	2	44.72	
14	11065	LILAS	8	2015-05-01	2015-05-29	[null]	1	12.91	
15	11064	SAVEA	1	2015-05-01	2015-05-29	2015-05-04	1	30.09	
16	11063	HUNGO	3	2015-04-30	2015-05-28	2015-05-06	2	81.73	
17	11062	REGGC	4	2015-04-30	2015-05-28	[null]	2	29.93	
18	11061	GREAL	4	2015-04-30	2015-06-11	[null]	3	14.01	
Total	rows: 831 (	Query complete 00:00:00	0.122						

9) Increase(Update) the unit price of all products in category\_id =2 by 10%.(HINT: unit\_price = unit\_price \* 1.10)

Before update: select \* from products where "categoryID" =2;

Data (	Data Output Messages Notifications							
=+	<b>□</b> ∨ □ ∨	<b>■ 4 × 5QL</b>						
	productID [PK] integer	productName character varying	quantityPerUnit character varying	unitPrice numeric	discontinued integer	categoryID integer		
1	3	Aniseed Syrup	12 - 550 ml bottles	10	0	2		
2	4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	22	0	2		
3	5	Chef Anton's Gumbo Mix	36 boxes	21.35	1	2		
4	6	Grandma's Boysenberry Spread	12 - 8 oz jars	25	0	2		
5	8	Northwoods Cranberry Sauce	12 - 12 oz jars	40	0	2		
6	15	Genen Shouyu	24 - 250 ml bottles	15.5	0	2		
7	44	Gula Malacca	20 - 2 kg bags	19.45	0	2		
8	61	Sirop d'érable	24 - 500 ml bottles	28.5	0	2		
9	63	Vegie-spread	15 - 625 g jars	43.9	0	2		
10	65	Louisiana Fiery Hot Pepper Sauce	32 - 8 oz bottles	21.05	0	2		
11	66	Louisiana Hot Spiced Okra	24 - 8 oz jars	17	0	2		
12	77	Original Frankfurter Grüne Soße	12 boxes	13	0	2		

## After update:

update products set "unitPrice" = "unitPrice" \* 1.10 where "categoryID" = 2; select \* from products where "categoryID" = 2;

Data	Output Messa	ages Notifications				
=+	<b>□</b> ∨ □ ∨	<b>1 1 1 2 1 2 3 3 3 3 3 3 3 3 3 3</b>				
	productID [PK] integer	productName character varying	quantityPerUnit character varying	unitPrice numeric	discontinued integer	categoryID integer
1	3	Aniseed Syrup	12 - 550 ml bottles	11.00	0	2
2	4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	24.20	0	2
3	5	Chef Anton's Gumbo Mix	36 boxes	23.4850	1	2
4	6	Grandma's Boysenberry Spread	12 - 8 oz jars	27.50	0	2
5	8	Northwoods Cranberry Sauce	12 - 12 oz jars	44.00	0	2
6	15	Genen Shouyu	24 - 250 ml bottles	17.050	0	2
7	44	Gula Malacca	20 - 2 kg bags	21.3950	0	2
8	61	Sirop d'érable	24 - 500 ml bottles	31.350	0	2
9	63	Vegie-spread	15 - 625 g jars	48.290	0	2
10	65	Louisiana Fiery Hot Pepper Sauce	32 - 8 oz bottles	23.1550	0	2
11	66	Louisiana Hot Spiced Okra	24 - 8 oz jars	18.70	0	2
12	77	Original Frankfurter Grüne Soße	12 boxes	14.30	0	2

10. Download the northwind.sql file into the 'northwind' database using pgadmin.

