

## **LAPORAN AKHIR PRAKTIKUM**

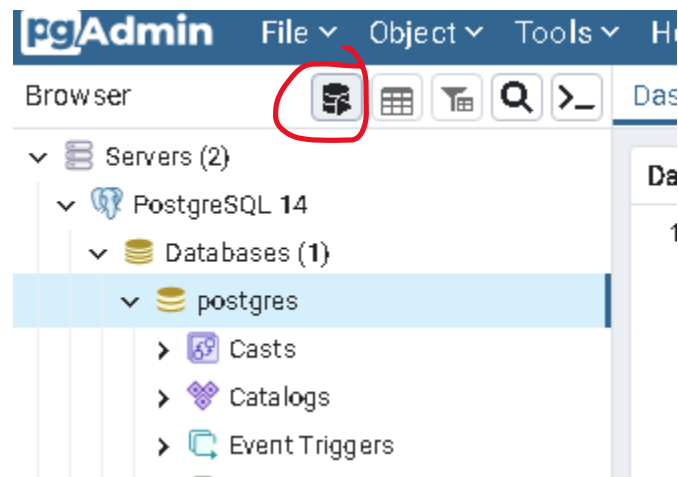
Mata Praktikum : Sistem Basis Data 1  
Kelas : 3IA02  
Praktikum ke- : 6  
Tanggal : 23/11/22  
Materi : Outer Join  
NPM : 50420562  
Nama : Ibrahim Bramullah  
Ketua Asisten : Natasya Rahma Fadilla  
Paraf Asisten :  
Nama Asisten :  
Jumlah Lembar : 8 Lembar

**LABORATORIUM TEKNIK INFORMATIKA**

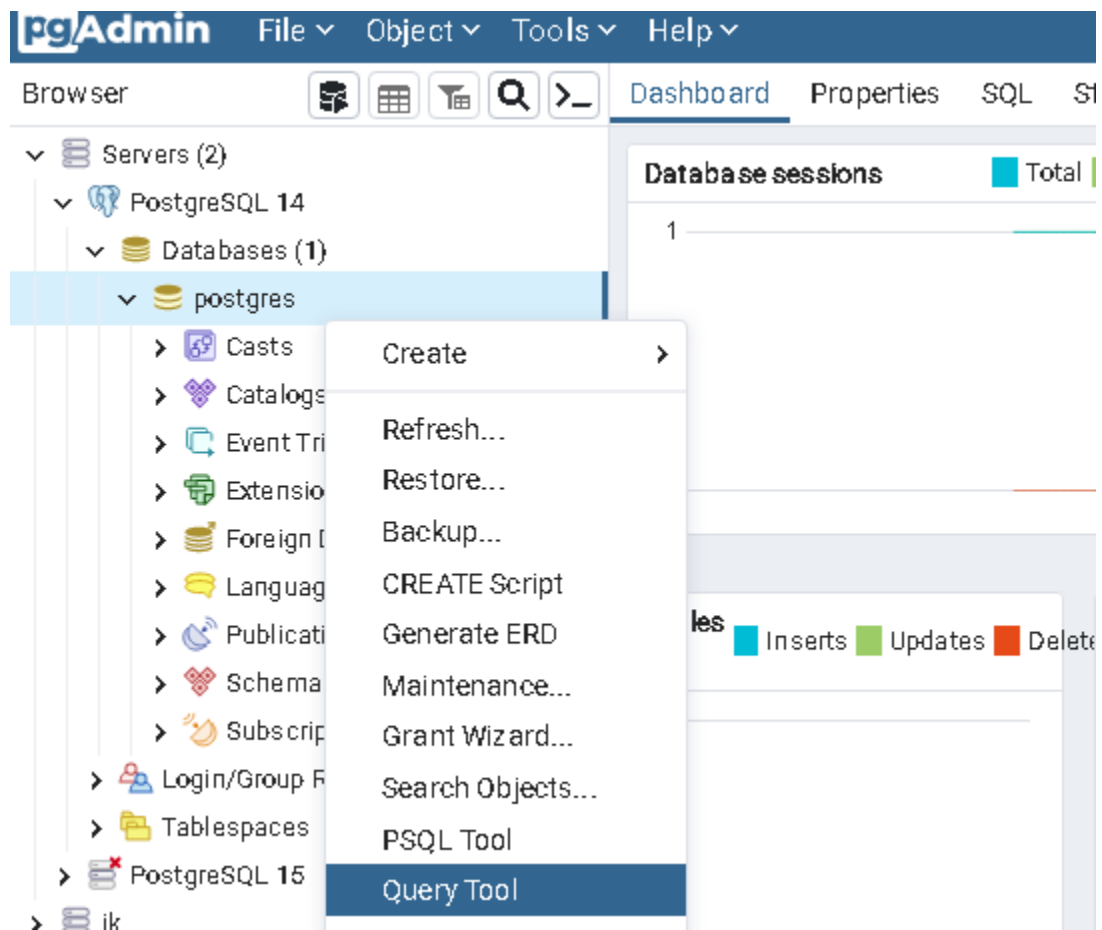
**UNIVERSITAS GUNADARMA**

**2022**

Buka Query Tool

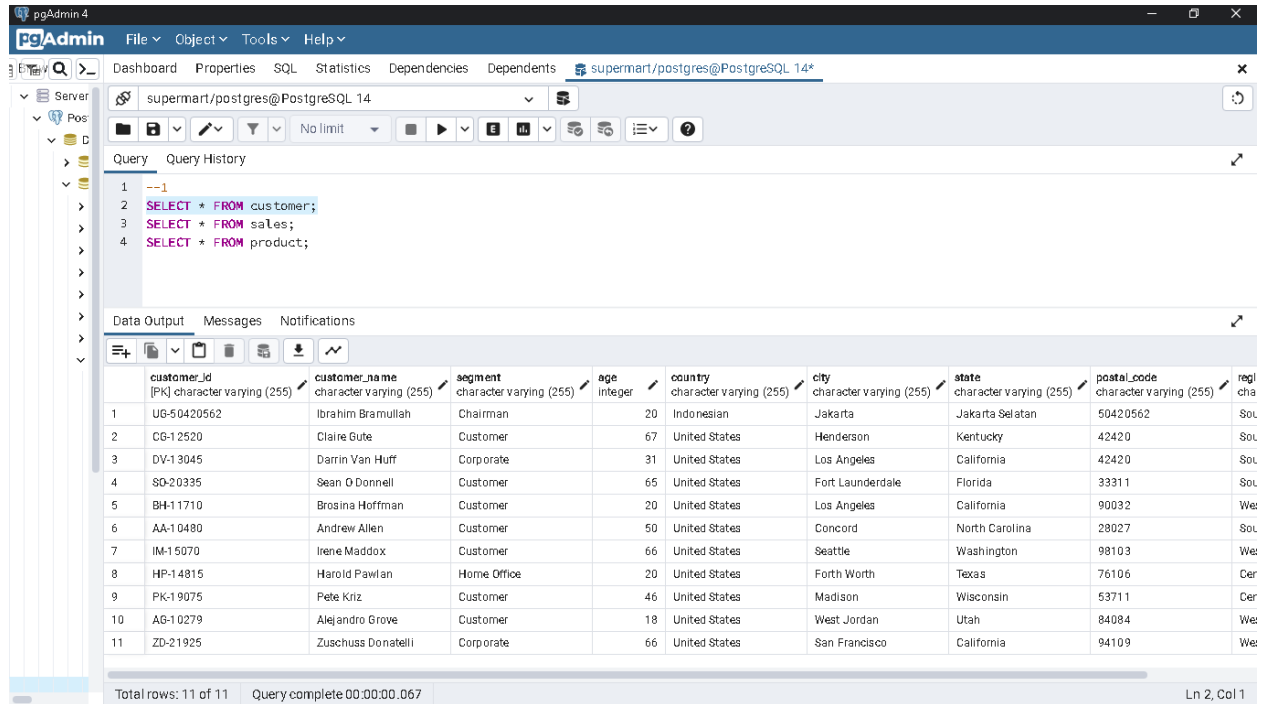


Atau dengan



1. Tampilkan table customer,sales, dan product yang telah dibuat pada database supermart.

## Customer:

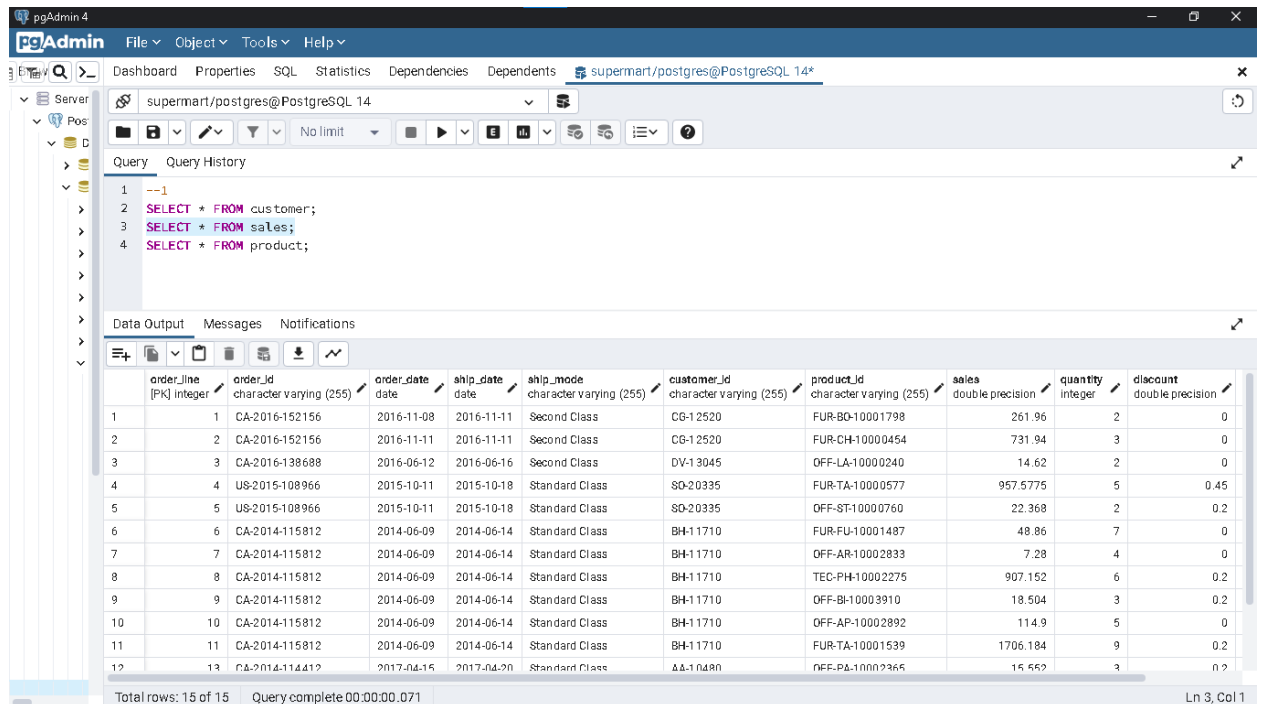


The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query is: `--1  
2 SELECT * FROM customer;  
3 SELECT * FROM sales;  
4 SELECT * FROM product;` The results are displayed in a table with 11 rows and 10 columns.

	customer_id [PK] character varying (255)	customer_name character varying (255)	segment character varying (255)	age integer	country character varying (255)	city character varying (255)	state character varying (255)	postal_code character varying (255)	regi cha
1	UG-50420562	Ibrahim Bramullah	Chairman	20	Indonesian	Jakarta	Jakarta Selatan	50420562	Sou
2	CG-12520	Claire Gule	Customer	67	United States	Henderson	Kentucky	42420	Sou
3	DV-13045	Darrin Van Huff	Corporate	31	United States	Los Angeles	California	42420	Sou
4	SO-20335	Sean O'Donnell	Customer	65	United States	Fort Lauderdale	Florida	33311	Sou
5	BH-11710	Brosina Hoffman	Customer	20	United States	Los Angeles	California	90032	We
6	AA-10480	Andrew Allen	Customer	50	United States	Concord	North Carolina	28027	Sou
7	IM-15070	Irene Maddox	Customer	66	United States	Seattle	Washington	98103	We
8	HP-14815	Harold Pawlan	Home Office	20	United States	Forth Worth	Texas	76106	Cer
9	PK-19075	Pete Kriz	Customer	46	United States	Madison	Wisconsin	53711	Cer
10	AG-10279	Alejandro Grove	Customer	18	United States	West Jordan	Utah	84084	We
11	ZD-21925	Zuschuss Donatelli	Corporate	66	United States	San Francisco	California	94109	We

Total rows: 11 of 11    Query complete 00:00:00.067    Ln 2, Col 1

## Sales:



The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query is: `--1  
2 SELECT * FROM customer;  
3 SELECT * FROM sales;  
4 SELECT * FROM product;` The results are displayed in a table with 12 rows and 11 columns.

	order_line [PK] integer	order_id character varying (255)	order_date date	ship_date date	ship_mode character varying (255)	customer_id character varying (255)	product_id character varying (255)	sales double precision	quantity integer	discount double precision
1	1	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-BQ-10001798	261.96	2	0
2	2	CA-2016-152156	2016-11-11	2016-11-11	Second Class	CG-12520	FUR-CH-10000454	731.94	3	0
3	3	CA-2016-138688	2016-06-12	2016-06-16	Second Class	DV-13045	OFF-LA-10000240	14.62	2	0
4	4	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	FUR-TA-10000577	957.5775	5	0.45
5	5	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	OFF-ST-10000760	22.368	2	0.2
6	6	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0
7	7	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0
8	8	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2
9	9	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2
10	10	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002899	114.9	5	0
11	11	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2
12	12	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.562	3	0.2

Total rows: 15 of 15    Query complete 00:00:00.071    Ln 3, Col 1

## Product:

pgAdmin 4

File Object Tools Help

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Query

```

1 --1
2 SELECT * FROM customer;
3 SELECT * FROM sales;
4 SELECT * FROM product;

```

Data Output

	product_id [PK] character varying (255)	category character varying (255)	sub_category character varying (255)	product_name character varying (255)
1	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabric Uph...
2	OFF-LA-10000240	Office Supplies	Labels	Self-Adhesive Address ...
3	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 Series...
4	OFF-ST-10000760	Office Supplies	Storage	Eldon Fold N Roll Cart ...
5	FUR-FU-10001487	Furniture	Furnishings	Eldon Expressions Wo...
6	OFF-AR-10002833	Office Supplies	Art	Newell 322
7	TEC-PH-10002775	Technology	Phones	Mitel 5320 IP Phone V...
8	OFF-BI-10003910	Office Supplies	Binders	DXL Angle-View Binder...
9	OFF-AP-10002892	Office Supplies	Appliances	Belkin F5C206VTEL 6 ...
10	FUR-TA-10001539	Furniture	Tables	Chromcraft Rectangula...
11	TEC-PH-10002033	Technology	Phones	Konftel 250 Conferenc...
12	OFF-PA-10002365	Office Supplies	Paper	Xerox 1967

Total rows: 15 of 15 Query complete 00:00:00.074 Ln 4, Col 1

- Buatlah program Full Outer Join pada PostgreSQL menggunakan 2 tabel untuk menampilkan seluruh kolom pada tabel sales dan product.

pgAdmin 4

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Query

```

6 --2
7 SELECT * FROM sales
8 FULL OUTER JOIN product
9 ON sales.product_id = product.product_id;
10

```

Data Output

	order_line integer	order_id character varying (255)	order_date date	ship_date date	ship_mode character varying (255)	customer_id character varying (255)	product_id character varying (255)	sales double precision	quantity integer	discount double
1	1	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-BO-10001798	261.96	2	
2	2	CA-2016-152156	2016-11-11	2016-11-11	Second Class	CG-12520	FUR-CH-10000454	731.94	3	
3	3	CA-2016-138688	2016-06-12	2016-06-16	Second Class	DV-13045	OFF-LA-10000240	14.62	2	
4	4	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	FUR-TA-10000577	957.5775	5	
5	5	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	OFF-ST-10000760	22.368	2	
6	6	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	
7	7	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	
8	8	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	
9	9	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	
10	10	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	
11	11	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	
12	13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	
13	14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	

Total rows: 18 of 18 Query complete 00:00:00.121 Ln 10, Col 1

- Buatlah program Left Join & Right Join pada PostgreSQL menggunakan 2 tabel dengan nama tabel "customer" dengan field customer\_id, customer\_name, segment, dan age, lalu tabel kedua yaitu "sales" dengan field order\_id, order\_date, ship\_mode, dan sales.

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```

11 --3
12 SELECT customer.customer_id, customer.customer_name, customer.segment, customer.age,
13 sales.order_id, sales.order_date, sales.ship_mode, sales.sales
14 FROM customer
15 LEFT JOIN sales
16 ON customer.customer_id = sales.customer_id;
17
18 --

```

customer_id character varying (255)	customer_name character varying (255)	segment character varying (255)	age integer	order_id character varying (255)	order_date date	ship_mode character varying (255)	sales double precision	
9	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	18.504
10	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	114.9
11	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	1706.184
12	AA-1 0480	Andrew Allen	Customer	50	CA-2014-114412	2017-04-15	Standard Class	15.552
13	IM-1 5070	Irene Maddox	Customer	66	CA-2014-161 389	2016-12-05	Standard Class	407.976
14	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	911.424
15	HP-1 4815	Harold Pawlan	Home Office	20	US-2015-118983	2015-11-22	Standard Class	68.81
16	PK-1 9075	Pete Kriz	Customer	46	[null]	[null]	[null]	[null]
17	AG-1 0279	Alejandro Grove	Customer	18	[null]	[null]	[null]	[null]
18	ZD-2 1925	Zuschuss Donatelli	Corporate	66	[null]	[null]	[null]	[null]
19	UG-50420562	Ibrahim Bramullah	Chairman	20	[null]	[null]	[null]	[null]

Total rows: 19 of 19 Query complete 00:00:00.085 Ln 17, Col 1

pgAdmin 4

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```

17 --
18 --
19 SELECT customer.customer_id, customer.customer_name, customer.segment, customer.age,
20 sales.order_id, sales.order_date, sales.ship_mode, sales.sales
21 FROM sales
22 RIGHT JOIN customer
23 ON sales.customer_id = customer.customer_id;
24

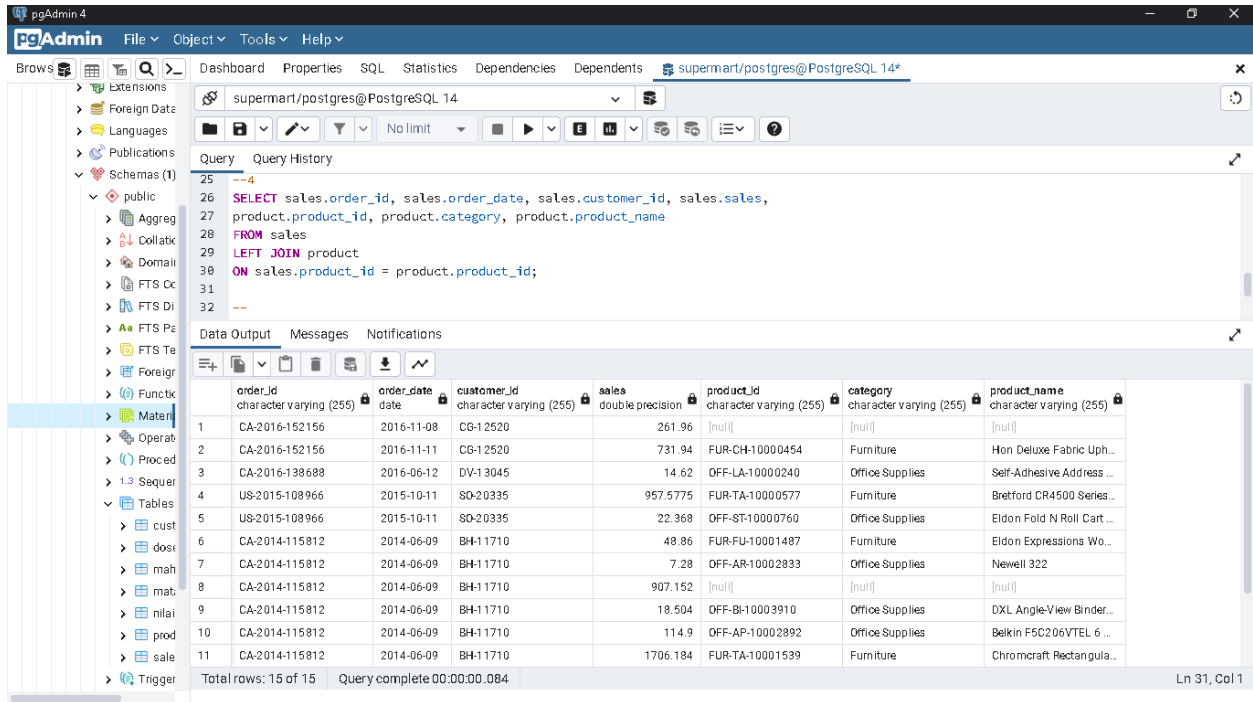
```

customer_id character varying (255)	customer_name character varying (255)	segment character varying (255)	age integer	order_id character varying (255)	order_date date	ship_mode character varying (255)	sales double precision	
1	CG-1 2520	Claire Gute	Customer	67	CA-2016-152156	2016-11-08	Second Class	261.96
2	CG-1 2520	Claire Gute	Customer	67	CA-2016-152156	2016-11-11	Second Class	731.94
3	DV-1 3045	Darrin Van Huff	Corporate	31	CA-2016-138688	2016-06-12	Second Class	14.62
4	SD-20335	Sean O Donnell	Customer	65	US-2015-108966	2015-10-11	Standard Class	957.5775
5	SD-20335	Sean O Donnell	Customer	65	US-2015-108966	2015-10-11	Standard Class	22.368
6	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	48.86
7	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	7.28
8	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	907.152
9	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	18.504
10	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	114.9
11	BH-1 1710	Brosina Hoffman	Customer	20	CA-2014-115812	2014-06-09	Standard Class	114.9

Total rows: 19 of 19 Query complete 00:00:00.072

Successfully run. Total query runtime: 72 msec. 19 rows affected.

- Buatlah program Left Join & Right Join pada PostgreSQL menggunakan 2 tabel dengan nama tabel "sales" dengan field order\_id, order\_date, customer\_id, dan sales, lalu tabel kedua yaitu "product" dengan field product\_id, category, dan product\_name.



The screenshot shows the pgAdmin 4 interface with a SQL query executed. The query is a LEFT JOIN between the 'sales' and 'product' tables. The results are displayed in a table with 11 rows and 8 columns.

```

25 --4
26 SELECT sales.order_id, sales.order_date, sales.customer_id, sales.sales,
27        product.product_id, product.category, product.product_name
28 FROM sales
29 LEFT JOIN product
30 ON sales.product_id = product.product_id;
31
32 --
  
```

	order_id character varying (255)	order_date date	customer_id character varying (255)	sales double precision	product_id character varying (255)	category character varying (255)	product_name character varying (255)
1	CA-2016-152156	2016-11-08	CG-12520	261.96	[null]	[null]	[null]
2	CA-2016-152156	2016-11-11	CG-12520	731.94	FUR-CH-10000454	Furniture	Hon Deluxe Fabric Uph...
3	CA-2016-138688	2016-06-12	DV-13045	14.62	OFF-LA-10000240	Office Supplies	Self-Adhesive Address ...
4	US-2015-108966	2015-10-11	SO-20335	957.5775	FUR-TA-10000577	Furniture	Bretford CR4500 Series...
5	US-2015-108966	2015-10-11	SO-20335	22.368	OFF-ST-10000760	Office Supplies	Eldon Fold N Roll Cart ...
6	CA-2014-115812	2014-06-09	BH-11710	48.86	FUR-FU-10001487	Furniture	Eldon Expressions Wo...
7	CA-2014-115812	2014-06-09	BH-11710	7.28	OFF-AR-10002833	Office Supplies	Newell 322
8	CA-2014-115812	2014-06-09	BH-11710	907.152	[null]	[null]	[null]
9	CA-2014-115812	2014-06-09	BH-11710	18.504	OFF-BK-10003910	Office Supplies	DXL Angle-View Binder...
10	CA-2014-115812	2014-06-09	BH-11710	114.9	OFF-AP-10002892	Office Supplies	Belkin F5C206VTEL 6 ...
11	CA-2014-115812	2014-06-09	BH-11710	1706.184	FUR-TA-10001539	Furniture	Chromcraft Rectangula...

Total rows: 15 of 15    Query complete 00:00:00.084    Ln 31, Col 1



pgAdmin 4

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Query Query History

```
45 LEFT JOIN product
46 ON sales.product_id = product.product_id;
47
48 --
49 SELECT customer.customer_id, customer.customer_name,
50 sales.order_date, sales.sales, product.product_id, product.product_name
51 FROM product
52 RIGHT JOIN sales
53 ON product.product_id = sales.product_id
54 RIGHT JOIN customer
55 ON sales.customer_id = customer.customer_id;
56
57
```

Data Output Messages Notifications

	customer_id character varying (255)	customer_name character varying (255)	order_date date	sales double precision	product_id character varying (255)	product_name character varying (255)
1	CG-1 2520	Claire Gute	2016-11-11	731.94	FUR-CH-10000454	Hon Deluxe Fabric Upholstered Stacking Chairs Rounded Back
2	DV-1 3045	Darrin Van Huff	2016-06-12	14.62	OFF-LA-10000240	Self-Adhesive Address Labels for Typewriters by Universal
3	SO-20335	Sean O Donnell	2015-10-11	957.5775	FUR-TA-10000577	Bretford CR4500 Series Slim Rectangular Table
4	SO-20335	Sean O Donnell	2015-10-11	22.368	OFF-ST-10000760	Eldon Fold N Roll Cart System
5	BH-1 1710	Brosina Hoffman	2014-06-09	48.86	FUR-FU-10001487	Eldon Expressions Wood and Plastic Desk Accessories Cherry Wood
6	BH-1 1710	Brosina Hoffman	2014-06-09	7.28	OFF-AR-10002833	Newell 322
7	BH-1 1710	Brosina Hoffman	2014-06-09	10.504	OFF-BL-10003010	DVI Audio View Reader with Locking Ring by Newell

Total rows: 19 of 19 Query complete 00:00:00.088 Ln 52, Col 17