LAPORAN AKHIR PRAKTIKUM

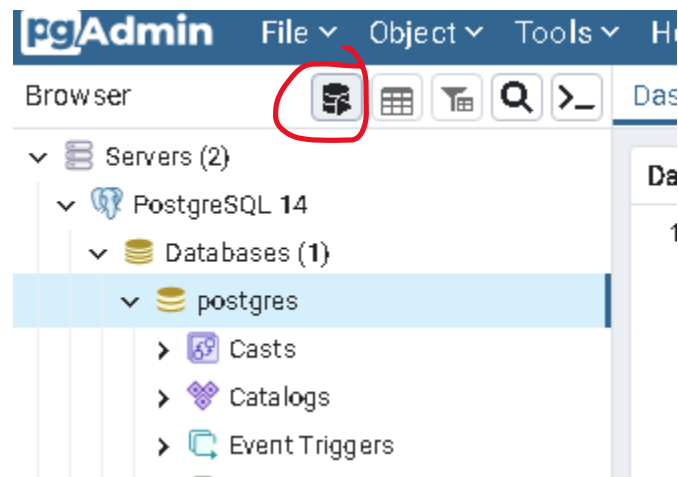|	
Mata Praktikum	: Interaksi Manusia dan Komputer
Kelas	: 3IA02
Praktikum ke-	: 3
Tanggal	: 26/10/22
Materi	: Data Transaction Language
NPM	: 50420562
Nama	: Ibrahim Bramullah
Ketua Asisten	: Natasya Rahma Fadilla
Paraf Asisten	:
Nama Asisten	:
Jumlah Lembar	: 11 Lembar

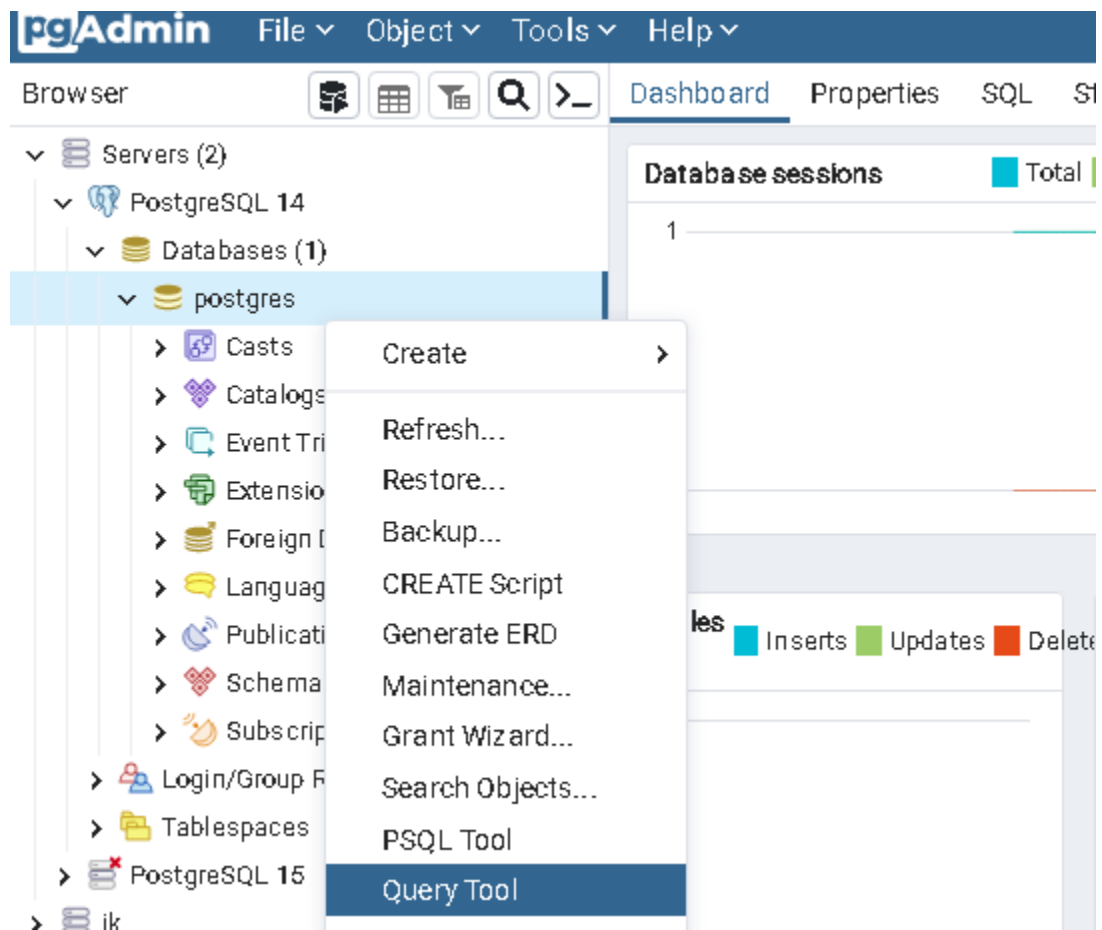**LABORATORIUM TEKNIK INFORMATIKA**

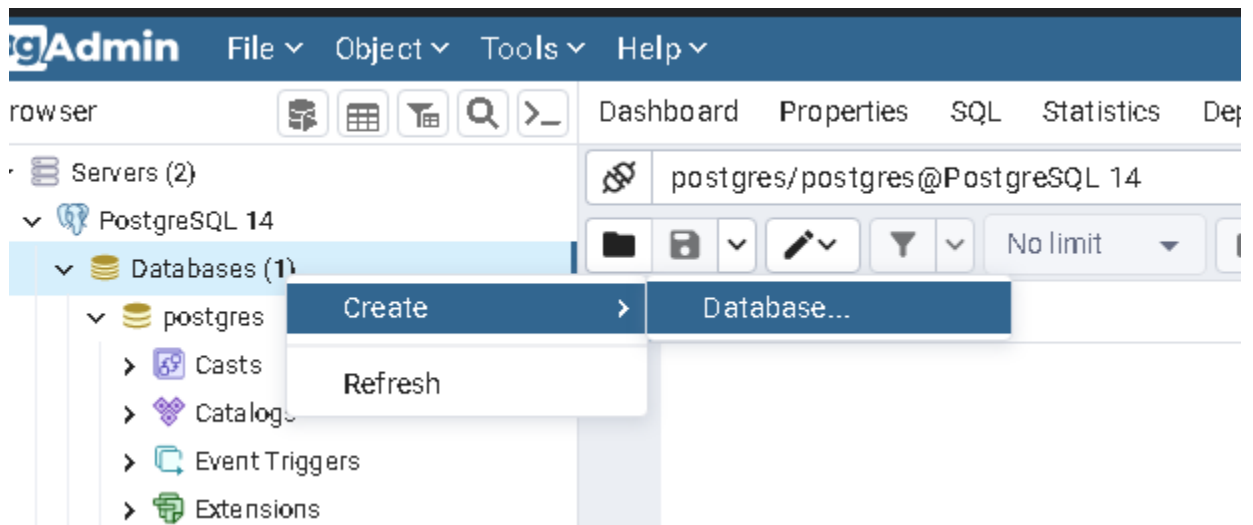**UNIVERSITAS GUNADARMA**

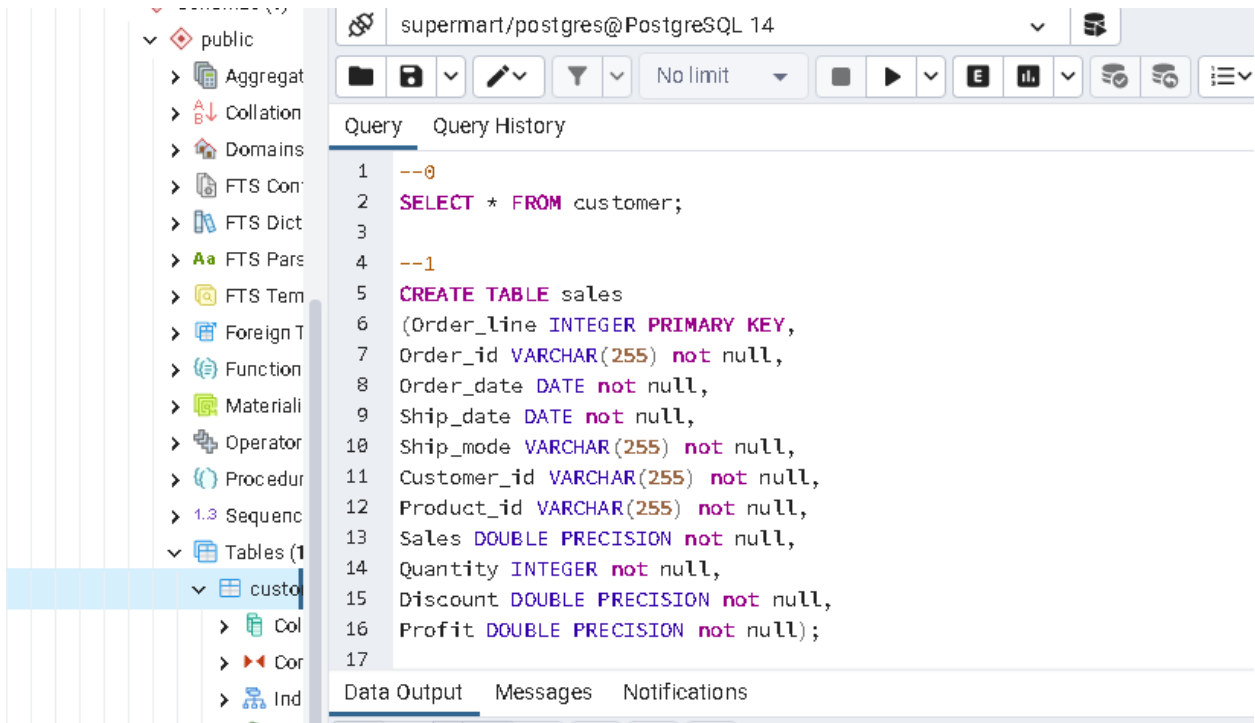**2022**

Buka Query Tool

Atau dengan

1. Buatlah database dengan nama supermart

.

2. Buat table dengan nama sales dengan ketentuan

Field	Tipe Data	Panjang	Keterangan
order_line	Integer	-	Primary Key
order_id	Varchar	255	Not Null
order_date	Date	-	Not Null
ship_date	Date	-	Not Null
ship_mode	Varchar	255	Not Null
customer_id	Varchar	255	Not Null
product_id	Varchar	255	Not Null
sales	Double Precision	-	Not Null
quantity	Integer	-	Not Null
discount	Double Precision	-	Not Null
profit	Double Precision	-	Not Null

..

3. Tampilkan struktur table sales yang telah dibuat

	g (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	profit double precision

4. Masukkan data berikut ke dalam table sales lalu tampilkan isi table customer tersebut

1	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-BO-10001798	261.96	2	0	41.9136
2	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-CH-10000454	731.94	3	0	219.582
3	CA-2016-138688	2016-06-12	2016-06-16	Second Class	DV-13045	OFF-LA-10000240	14.62	2	0	6.8714
4	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	FUR-TA-10000577	957.5775	5	0.45	-383.031
5	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	OFF-ST-10000760	22.368	2	0.2	2.5164
6	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	68.3568
13	CA-2017-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
14	CA-2016-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10003656	407.976	3	0.2	132.5922
15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	-123.858
16	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-BI-10000756	2.544	3	0.8	-3.816

..

```sql
19  SELECT * FROM sales;
20
21  --3
22  INSERT INTO sales VALUES(1,'CA-2016-152156','2016-11-08','2016-11-11','Second Class','CG-12520','FUR-BO-10001798',261.96,2,0,41.9136);
23  INSERT INTO sales VALUES(2,'CA-2016-152156','2016-11-11','2016-11-11','Second Class','CG-12520','FUR-CH-10000454',731.94,3,0,219.582);
24  INSERT INTO sales VALUES(3,'CA-2016-138688','2016-06-12','2016-06-16','Second Class','DV-13045','OFF-LA-10000240',14.62,2,0,6.8714);
25  INSERT INTO sales VALUES(4,'US-2015-108966','2015-10-11','2015-10-18','Standard Class','SO-20335','FUR-TA-10000577',957.5775,5,0.45,-383.031);
26  INSERT INTO sales VALUES(5,'US-2015-108966','2015-10-11','2015-10-18','Standard Class','SO-20335','OFF-ST-10000760',22.368,2,0.2,2.5164);
27  INSERT INTO sales VALUES(6,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','FUR-FU-10001487',48.86,7,0,14.1694);
28  INSERT INTO sales VALUES(7,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','OFF-AR-10002833',7.28,4,0,1.9656);
29  INSERT INTO sales VALUES(8,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','TEC-PH-10002275',907.152,6,0.2,90.7152);
30  INSERT INTO sales VALUES(9,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','OFF-BI-10003910',18.504,3,0.2,5.7825);
31  INSERT INTO sales VALUES(10,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','OFF-AP-10002892',114.9,5,0,34.47);
32  INSERT INTO sales VALUES(11,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','FUR-TA-10001539',1706.184,9,0.2,85.3092);
33  INSERT INTO sales VALUES(12,'CA-2014-115812','2014-06-09','2014-06-14','Standard Class','BH-11710','TEC-PH-10002033',911.424,4,0.2,68.3568);
34  INSERT INTO sales VALUES(13,'CA-2014-114412','2017-04-15','2017-04-20','Standard Class','AA-10480','OFF-PA-10002365',15.552,3,0.2,5.4432);
35  INSERT INTO sales VALUES(14,'CA-2014-161389','2016-12-05','2016-12-10','Standard Class','IM-15070','OFF-BI-10002365',407.976,3,0.2,132.5922);
36  INSERT INTO sales VALUES(15,'US-2015-118983','2015-11-22','2015-11-26','Standard Class','HP-14815','OFF-AP-10002311',68.81,5,0.8,-123.858);
37  INSERT INTO sales VALUES(16,'US-2015-118983','2015-11-22','2015-11-26','Standard Class','HP-14815','OFF-BI-10000756',2.544,3,0.8,-3.816);
38
```

Data Output Messages Notifications

INSERT 0 1

Query returned successfully in 71 msec.

..

	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	pro do
1	1	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-BO-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-10002892	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-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	
13	13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	
14	14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	
15	15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	
16	16	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-BI-10000756	2.544	3	0.8	

	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	profit double precision
1	CA-2016-152156	2016-11-08	2016-11-11	Second Class	CG-12520	FUR-BO-10001798	261.96	2	0	41.9136
2	CA-2016-152156	2016-11-11	2016-11-11	Second Class	CG-12520	FUR-CH-10000454	731.94	3	0	219.582
3	CA-2016-138688	2016-06-12	2016-06-16	Second Class	DV-13045	OFF-LA-10000240	14.62	2	0	6.8714
4	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	FUR-TA-10000577	957.5775	5	0.45	-383.031
5	US-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	OFF-ST-10000760	22.368	2	0.2	2.5164
6	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	68.3568
13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	132.5922
15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	-123.858
16	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-BI-10000756	2.544	3	0.8	-3.816

5. Tambahkan 1 record data dengan order_line = 17 (field lain isi bebas)

```
40
41  --4
42  INSERT INTO sales VALUES(17,'CN-2022-446862','2019-12-31','2022-11-3','VIP Class','SEA-19121','CVD-OI-10000019',0.00,0.00,100.00,-100.00);
43
44  --5
45
```

Data Output Messages Notifications

```
INSERT 0 1

Query returned successfully in 75 msec.
```

..

```
41  --4
42  INSERT INTO sales VALUES(17,'CN-2022-446862','2019-12-31','2022-11-3','VIP Class','SEA-19121','CVD-OI-10000019',0.00,0.00,100.00,-100.00);
43
44  SELECT * FROM sales;
45
```

Data Output Messages Notifications

	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
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-10002892	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-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2
13	13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2
14	14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2
15	15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8
16	16	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-BI-10000756	2.544	3	0.8
17	17	CN-2022-446862	2019-12-31	2022-11-03	VIP Class	SEA-19121	CVD-OI-10000019	0	0	100

```
41  --4
42  INSERT INTO sales VALUES(17,'CN-2022-446862','2019-12-31','2022-11-3','VIP Class','SEA-19121','CVD-OI-10000019',0.00,0.00,100.00,-100.00);
43
44  SELECT * FROM sales;
45
```

Data Output Messages Notifications

	ler_id aracter 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	profit double precision
5	-2015-108966	2015-10-11	2015-10-18	Standard Class	SO-20335	OFF-ST-10000760	22.368	2	0.2	2.5164
6	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	68.3568
13	-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
14	-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	132.5922
15	-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	-123.858
16	-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-BI-10000756	2.544	3	0.8	-3.816
17	-2022-446862	2019-12-31	2022-11-03	VIP Class	SEA-19121	CVD-OI-10000019	0	0	100	-100

6. Buatlah perintah COMMIT dengan menghapus record yang memiliki order_line 16 dan 17

Schemas (1)

ublic

Aggregates

Collations

Domains

FTS Configurations

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables (2)

Query   Query History

```
1   --5
2   BEGIN;
3   SELECT * FROM sales;
4   DELETE FROM sales WHERE Order_line = 16;
5   DELETE FROM sales WHERE Order_line = 17;
6   COMMIT;
```

Data Output   Messages   Notifications

COMMIT

Query returned successfully in 53 msec.

Databases (2)
> postgres
> supermart
  > Casts
  > Catalogs
  > Event Trigge
  > Extensions
  > Foreign Data
  > Languages
  > Publications
  > Schemas (1
    > public
      > Aggreg
      > Collatic
      > Domai
      > FTS Cc
      > FTS Di
      > FTS Pa
      > FTS Te
      > Foreign
      > Functic
      > Materi
      > Operat
      > Proced
      > Seque

Query   Query History

```
1   --5
2   BEGIN;
3   DELETE FROM sales WHERE Order_line = 16;
4   DELETE FROM sales WHERE Order_line = 17;
5   COMMIT;
6
7   SELECT * FROM sales;
8
```

Data Output   Messages   Notifications

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	disc dout
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	12	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	
13	13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	
14	14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	
15	15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	

	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	profit double precision
5	2015-10-11	2015-10-16	Standard Class	GG-20555	OFF-ST-10000780	22.368	2	0.2	2.3184
6	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	68.3568
13	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
14	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	132.5922
15	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	-123.858

7. Lakukan ROLLBACK dari hasil COMMIT pada nomor 5 (screenshot output/message yang dihasilkan)

8. Membuat perintah ROLLBACK dengan mengupdate quantity (ditambah atau dikurangi) dari 2 record berbeda (order_line bebas)

```
8
9    SELECT * FROM sales;
10   --7
11   UPDATE sales SET Quantity = '10' WHERE Order_line = 15;
12   UPDATE sales SET Quantity = '0' WHERE Order_line = 12;
13   ROLLBACK;
14
```

Data Output   Messages   Notifications

UPDATE 1

Query returned successfully in 80 msec.

....

```
2
3    SELECT * FROM sales;
4
5    UPDATE sales SET Quantity = '10' WHERE Order_line 15;
6    UPDATE sales SET Quantity = '0' WHERE Order_line 12;
```

Data Output   Messages   Notifications

	te	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	profit double precision
	11	2013-10-18	Standard Class	GG-20555	OFF-ST-10000780	22.368	2	0.2	2.3184
6	09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
13	05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	132.5922
14	22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	10	0.8	-123.858
15	09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	0	0.2	68.3568

..

Object Browser (left panel)

- Foreign Data Wrappers
- Languages
- Publications
- Schemas (1)
  - public
    - Aggregates
    - Collations
    - Domains
    - FTS Configurations
    - FTS Dictionaries
    - FTS Parsers
    - FTS Templates
    - Foreign Tables
    - Functions
    - Materialized Views
    - Operators
    - Procedures
    - Sequences
    - Tables (2)
      - customer
      - sales
        - Columns
        - Constraints
        - Indexes
        - RLS Policies
        - Rules
        - Triggers

Query

```
1  UPDATE sales SET Quantity = '10' WHERE Order_line = 15;
2  UPDATE sales SET Quantity = '10' WHERE Order_line = 12;
3  rollback;
4
5  SELECT * FROM sales;
```

Data Output | Messages | Notifications

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	qua inte
6	6	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	
7	7	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	
8	8	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	
9	9	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	
10	10	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	
11	11	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	
12	13	CA-2014-114412	2017-04-15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	
13	14	CA-2014-161389	2016-12-05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	
14	12	CA-2014-115812	2014-06-09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	
15	15	US-2015-118983	2015-11-22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	

Total rows: 15 of 15   Query complete 00:00:00.080   Ln 5, Col 1

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Data Output | Messages | Notifications

	te	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	profit double precision
6	09	2014-06-14	Standard Class	BH-11710	FUR-FU-10001487	48.86	7	0	14.1694
7	09	2014-06-14	Standard Class	BH-11710	OFF-AR-10002833	7.28	4	0	1.9656
8	09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002275	907.152	6	0.2	90.7152
9	09	2014-06-14	Standard Class	BH-11710	OFF-BI-10003910	18.504	3	0.2	5.7825
10	09	2014-06-14	Standard Class	BH-11710	OFF-AP-10002892	114.9	5	0	34.47
11	09	2014-06-14	Standard Class	BH-11710	FUR-TA-10001539	1706.184	9	0.2	85.3092
12	15	2017-04-20	Standard Class	AA-10480	OFF-PA-10002365	15.552	3	0.2	5.4432
13	05	2016-12-10	Standard Class	IM-15070	OFF-BI-10002365	407.976	3	0.2	132.5922
14	09	2014-06-14	Standard Class	BH-11710	TEC-PH-10002033	911.424	4	0.2	68.3568
15	22	2015-11-26	Standard Class	HP-14815	OFF-AP-10002311	68.81	5	0.8	-123.858

Total rows: 15 of 15   Query complete 00:00:00.080   Ln 5, Col 1