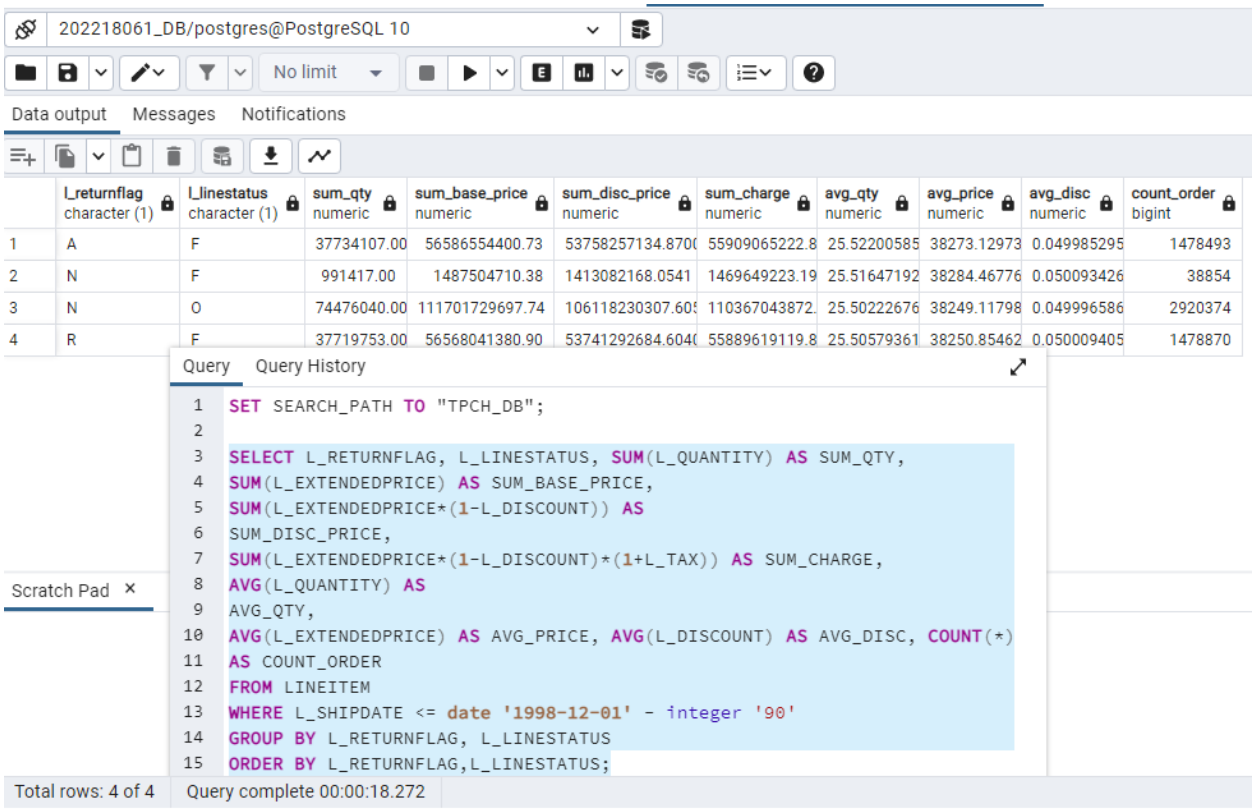
NAME-JATAN SAHU
STUDENT ID - 202218061
LAB 5 -ASSIGNMENT

Query 1 - Pricing Summary Report

```
SELECT L_RETURNFLAG, L_LINESTATUS, SUM(L_QUANTITY) AS
SUM_QTY,
SUM(L_EXTENDEDPRICE) AS SUM_BASE_PRICE,
SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)) AS
SUM_DISC_PRICE,
SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)*(1+L_TAX)) AS
SUM_CHARGE,
AVG(L_QUANTITY) AS
AVG_QTY,
AVG(L_EXTENDEDPRICE) AS AVG_PRICE, AVG(L_DISCOUNT) AS
AVG_DISC, COUNT(*)
AS COUNT_ORDER
FROM LINEITEM
WHERE L_SHIPDATE <= date '1998-12-01' - integer '90'
GROUP BY L_RETURNFLAG, L_LINESTATUS
ORDER BY L_RETURNFLAG,L_LINESTATUS;
```

OUTPUT:

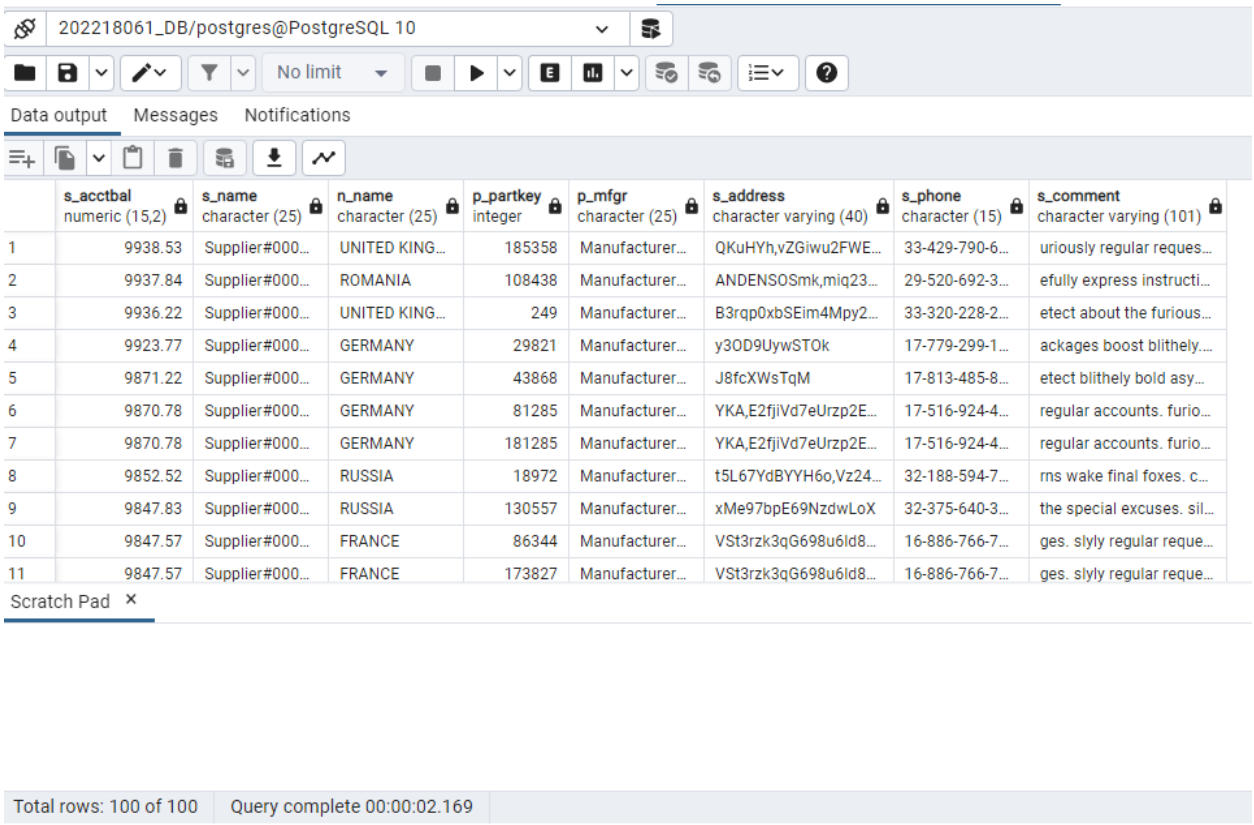


Query 2 - Minimum Cost Supplier

SELECT S_ACCTBAL, S_NAME, N_NAME, P_PARTKEY, P_MFGR, S_ADDRESS, S_PHONE,
S_COMMENT
FROM PART, SUPPLIER, PARTSUPP, NATION, REGION
WHERE P_PARTKEY = PS_PARTKEY AND S_SUPPKEY = PS_SUPPKEY AND P_SIZE = 15
AND
P_TYPE LIKE '%%BRASS' AND S_NATIONKEY = N_NATIONKEY AND N_REGIONKEY =
R_REGIONKEY AND
R_NAME = 'EUROPE' AND
PS_SUPPLYCOST = (SELECT MIN(PS_SUPPLYCOST) FROM PARTSUPP, SUPPLIER,
NATION, REGION

```
WHERE P_PARTKEY = PS_PARTKEY AND S_SUPPKEY =
PS_SUPPKEY
AND S_NATIONKEY = N_NATIONKEY AND N_REGIONKEY =
R_REGIONKEY AND R_NAME
= 'EUROPE')
ORDER BY S_ACCTBAL DESC, N_NAME, S_NAME, P_PARTKEY
LIMIT 100;
```

OUTPUT:



202218061_DB/postgres@PostgreSQL 10

No limit

Data output | Messages | Notifications

	s_acctbal numeric (15,2)	s_name character (25)	n_name character (25)	p_partkey integer	p_mfgr character (25)	s_address character varying (40)	s_phone character (15)	s_comment character varying (101)
1	9938.53	Supplier#000...	UNITED KING...	185358	Manufacturer...	QKuHYh,vZGiwu2FWE...	33-429-790-6...	uriously regular reques...
2	9937.84	Supplier#000...	ROMANIA	108438	Manufacturer...	ANDENSOSmk,miq23...	29-520-692-3...	efully express instructi...
3	9936.22	Supplier#000...	UNITED KING...	249	Manufacturer...	B3rqp0xbSEim4Mpy2...	33-320-228-2...	etect about the furious...
4	9923.77	Supplier#000...	GERMANY	29821	Manufacturer...	y3OD9UywSTOk	17-779-299-1...	ackages boost blithely....
5	9871.22	Supplier#000...	GERMANY	43868	Manufacturer...	J8fcXWsTqM	17-813-485-8...	etect blithely bold asy...
6	9870.78	Supplier#000...	GERMANY	81285	Manufacturer...	YKA,E2fjiVd7eUrzp2E...	17-516-924-4...	regular accounts. furio...
7	9870.78	Supplier#000...	GERMANY	181285	Manufacturer...	YKA,E2fjiVd7eUrzp2E...	17-516-924-4...	regular accounts. furio...
8	9852.52	Supplier#000...	RUSSIA	18972	Manufacturer...	t5L67YdBYYH6o,Vz24...	32-188-594-7...	rns wake final foxes. c...
9	9847.83	Supplier#000...	RUSSIA	130557	Manufacturer...	xMe97bpE69NzdwLoX	32-375-640-3...	the special excuses. sil...
10	9847.57	Supplier#000...	FRANCE	86344	Manufacturer...	VSt3rzk3qG698u6ld8...	16-886-766-7...	ges. slyly regular reque...
11	9847.57	Supplier#000...	FRANCE	173827	Manufacturer...	VSt3rzk3qG698u6ld8...	16-886-766-7...	ges. slyly regular reque...

Scratch Pad

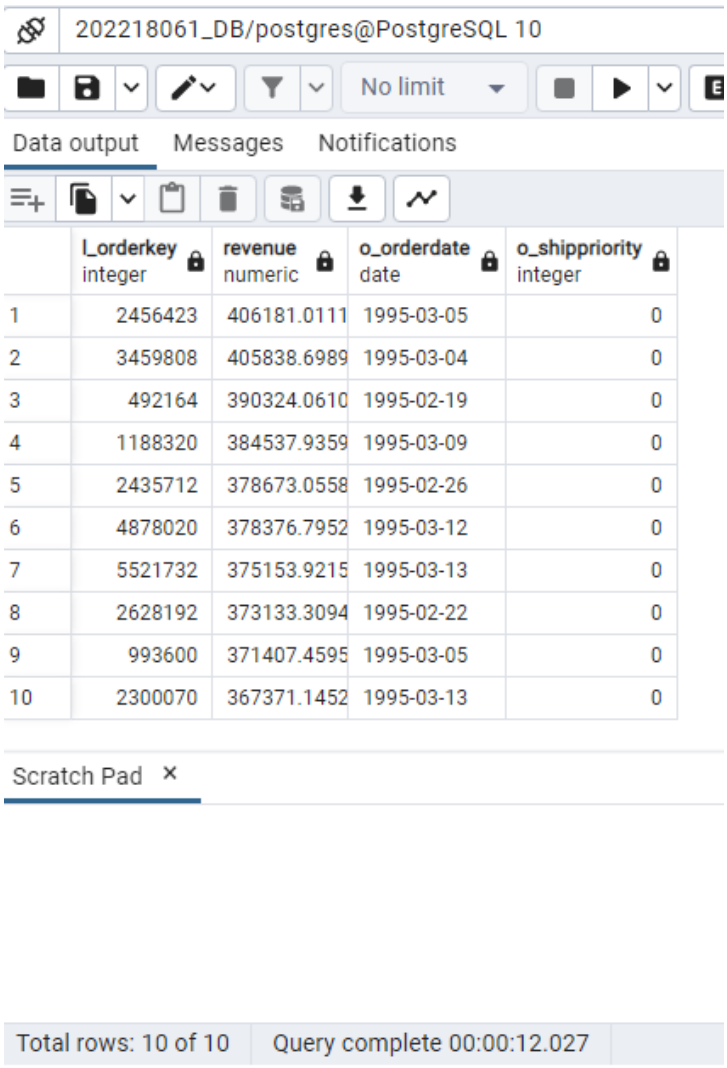
Total rows: 100 of 100 | Query complete 00:00:02.169

Query 3 - Shipping Priority

```
SELECT L_ORDERKEY,
SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)) AS REVENUE,
O_ORDERDATE,
O_SHIPPRIORITY
FROM CUSTOMER, ORDERS, LINEITEM
```

```
WHERE C_MKTSEGMENT = 'BUILDING' AND C_CUSTKEY =
O_CUSTKEY AND
L_ORDERKEY = O_ORDERKEY
AND
O_ORDERDATE < '1995-03-15' AND L_SHIPDATE >'1995-03-15'
GROUP BY L_ORDERKEY, O_ORDERDATE, O_SHIPPRIORITY
ORDER BY REVENUE DESC, O_ORDERDATE
LIMIT 10;
```

OUTPUT:

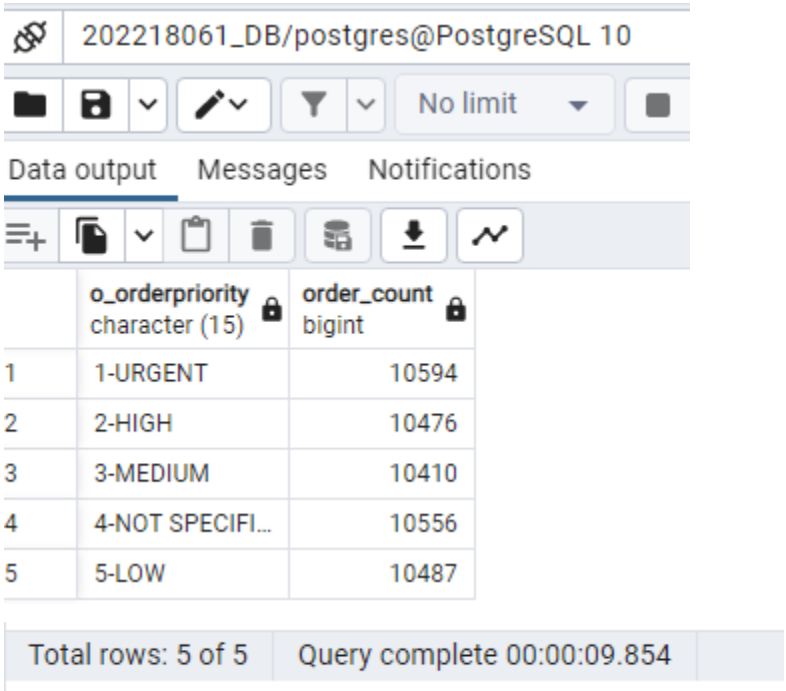


	l_orderkey integer	revenue numeric	o_orderdate date	o_shippriority integer
1	2456423	406181.0111	1995-03-05	0
2	3459808	405838.6989	1995-03-04	0
3	492164	390324.0610	1995-02-19	0
4	1188320	384537.9359	1995-03-09	0
5	2435712	378673.0558	1995-02-26	0
6	4878020	378376.7952	1995-03-12	0
7	5521732	375153.9215	1995-03-13	0
8	2628192	373133.3094	1995-02-22	0
9	993600	371407.4595	1995-03-05	0
10	2300070	367371.1452	1995-03-13	0

Query 4 - Order Priority Checking

```
SELECT O_ORDERPRIORITY, COUNT(*) AS ORDER_COUNT
FROM ORDERS
WHERE O_ORDERDATE >= DATE '1993-07-01' AND
O_ORDERDATE < DATE '1993-07-01' +
INTERVAL '3
MONTH'
AND EXISTS (SELECT * FROM LINEITEM WHERE L_ORDERKEY =
O_ORDERKEY AND
L_COMMITDATE <
L_RECEIPTDATE)
GROUP BY O_ORDERPRIORITY
ORDER BY O_ORDERPRIORITY;
```

OUTPUT:

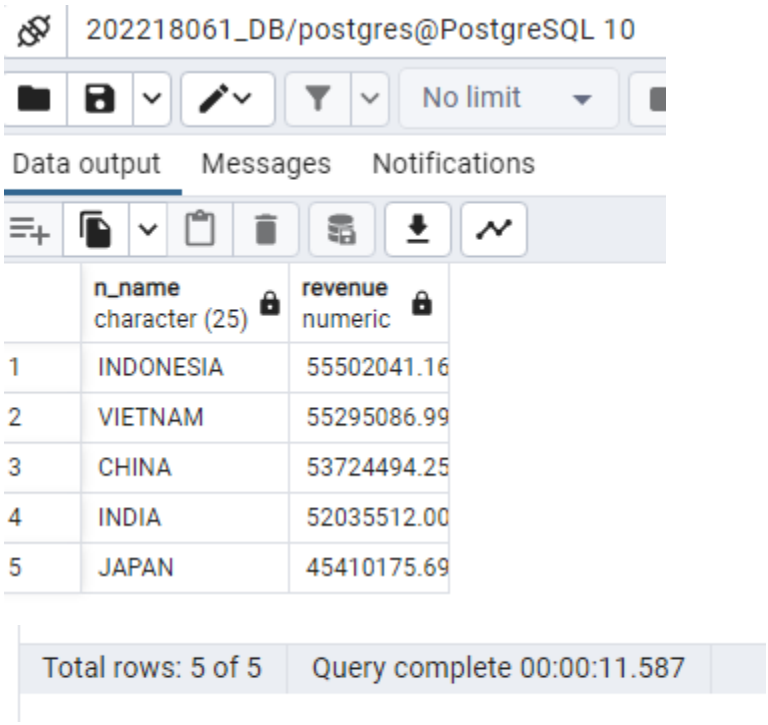


Query 5 - Local Supplier Volume

```
SELECT N_NAME, SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT))
AS REVENUE
FROM CUSTOMER, ORDERS, LINEITEM, SUPPLIER, NATION,
REGION
```

```
WHERE C_CUSTKEY = O_CUSTKEY AND L_ORDERKEY =
O_ORDERKEY AND
L_SUPPKEY = S_SUPPKEY
AND C_NATIONKEY = S_NATIONKEY AND S_NATIONKEY =
N_NATIONKEY AND
N_REGIONKEY =
R_REGIONKEY
AND R_NAME = 'ASIA' AND O_ORDERDATE >= DATE '1994-01-01'
AND O_ORDERDATE < DATE '1994-01-01' + INTERVAL '1 YEAR'
GROUP BY N_NAME
ORDER BY REVENUE DESC;
```

OUTPUT:

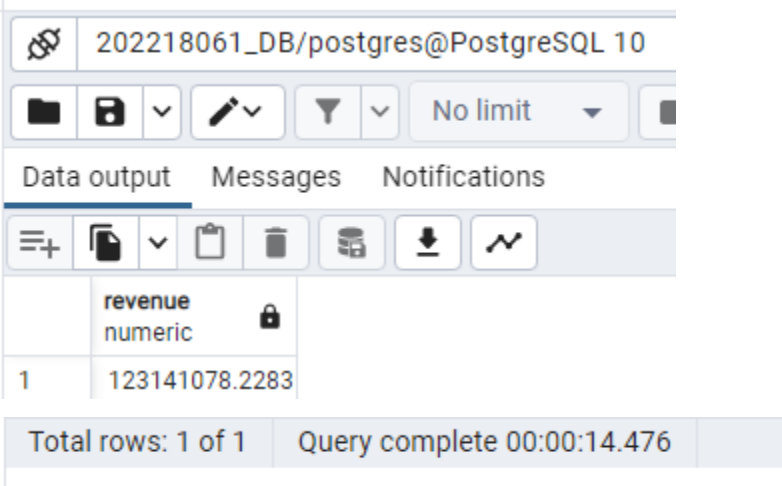


Query 6 - Forecasting Revenue Change

```
SELECT SUM(L_EXTENDEDPRICE*L_DISCOUNT) AS REVENUE
FROM LINEITEM
WHERE L_SHIPDATE >= '1994-01-01' AND L_SHIPDATE <DATE
'1994-01-01' + INTERVAL '1
```

YEAR'
AND L_DISCOUNT BETWEEN .06 - 0.01 AND .06 + 0.01 AND
L_QUANTITY < 24;

OUTPUT:

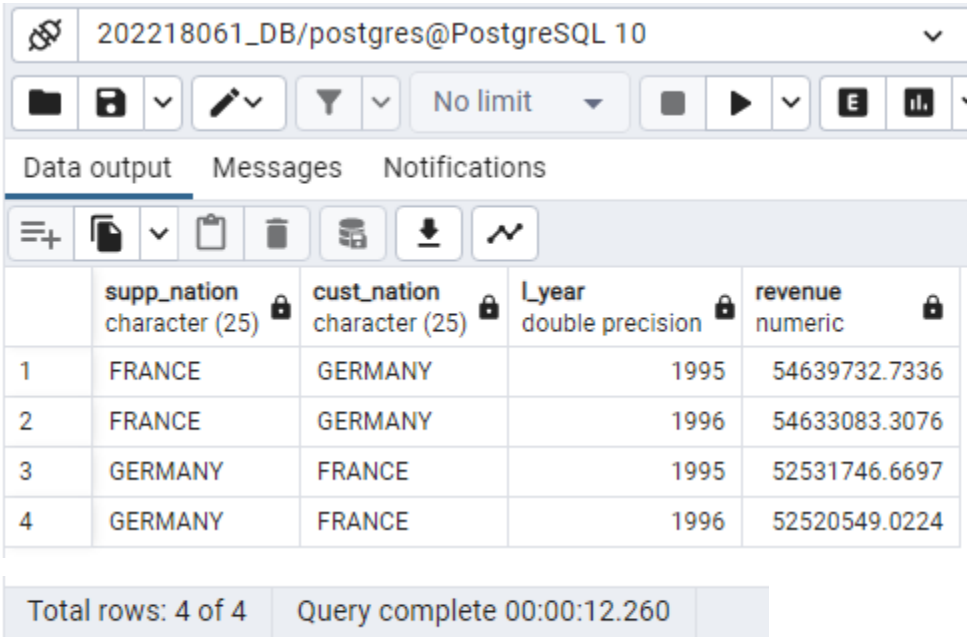


Query 7 - Volume Shipping

```
SELECT SUPP_NATION, CUST_NATION, L_YEAR, SUM(VOLUME)
AS REVENUE
FROM ( SELECT N1.N_NAME AS SUPP_NATION, N2.N_NAME AS
CUST_NATION,
DATE_PART('year',
L_SHIPDATE) AS L_YEAR,
L_EXTENDEDPRICE*(1-L_DISCOUNT) AS VOLUME
FROM SUPPLIER, LINEITEM, ORDERS, CUSTOMER, NATION N1,
NATION N2
WHERE S_SUPPKEY = L_SUPPKEY AND O_ORDERKEY =
L_ORDERKEY AND
C_CUSTKEY = O_CUSTKEY
AND S_NATIONKEY = N1.N_NATIONKEY AND C_NATIONKEY =
N2.N_NATIONKEY AND
((N1.N_NAME = 'FRANCE' AND N2.N_NAME = 'GERMANY') OR
```

```
(N1.N_NAME = 'GERMANY' AND N2.N_NAME = 'FRANCE')) AND
L_SHIPDATE BETWEEN '1995-01-01' AND '1996-12-31' ) AS
SHIPPING
GROUP BY SUPP_NATION, CUST_NATION, L_YEAR
ORDER BY SUPP_NATION, CUST_NATION, L_YEAR;
```

OUTPUT:



	supp_nation character (25)	cust_nation character (25)	l_year double precision	revenue numeric
1	FRANCE	GERMANY	1995	54639732.7336
2	FRANCE	GERMANY	1996	54633083.3076
3	GERMANY	FRANCE	1995	52531746.6697
4	GERMANY	FRANCE	1996	52520549.0224

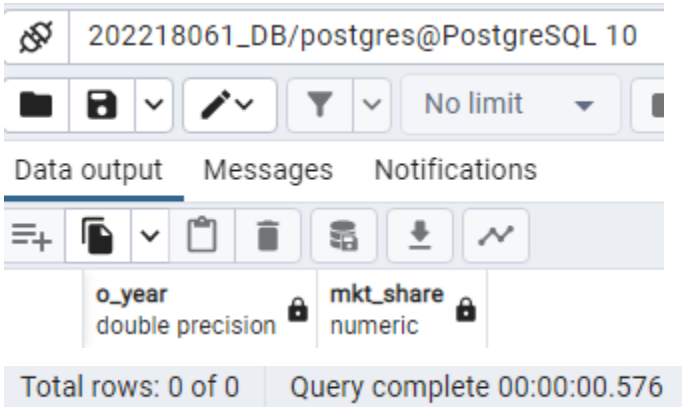
Total rows: 4 of 4 | Query complete 00:00:12.260

Query 8 - National Market Share */

```
SELECT O_YEAR, SUM(CASE WHEN NATION = 'BRAZIL' THEN
VOLUME ELSE 0
END)/SUM(VOLUME) AS
MKT_SHARE
FROM (SELECT date_part('year',O_ORDERDATE) AS O_YEAR,
L_EXTENDEDPRICE*(1-L_DISCOUNT) AS
VOLUME, N2.N_NAME AS NATION
FROM PART, SUPPLIER, LINEITEM, ORDERS, CUSTOMER,
NATION N1, NATION N2,
REGION
```

```
WHERE P_PARTKEY = L_PARTKEY AND S_SUPPKEY =
L_SUPPKEY AND L_ORDERKEY =
O_ORDERKEY
AND O_CUSTKEY = C_CUSTKEY AND C_NATIONKEY =
N1.N_NATIONKEY AND
N1.N_REGIONKEY = R_REGIONKEY AND R_NAME = 'AMERICA'
AND S_NATIONKEY =
N2.N_NATIONKEY
AND O_ORDERDATE BETWEEN '1995-01-01' AND '1996-12-31'
AND P_TYPE= 'ECONOMY
ANODIZED

STEEL') AS ALL_NATIONS
GROUP BY O_YEAR
ORDER BY O_YEAR;
```

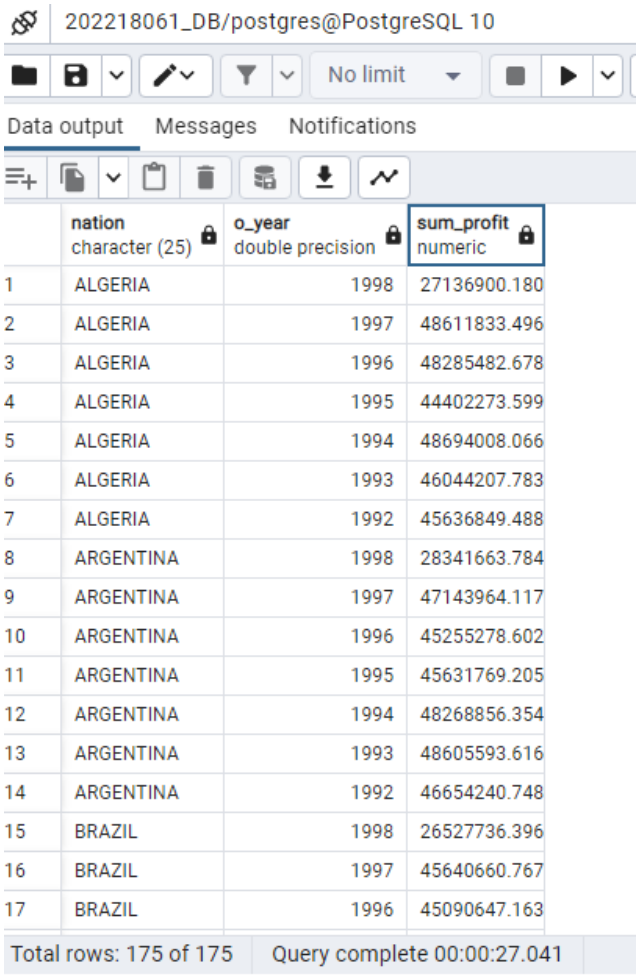


Query 9 - Product Type Profit Measure

```
SELECT NATION, O_YEAR, SUM(AMOUNT) AS SUM_PROFIT
FROM (SELECT N_NAME AS NATION, date_part('year',
O_ORDERDATE) AS O_YEAR,
L_EXTENDEDPRICE*(1-L_DISCOUNT)-PS_SUPPLYCOST*L_QUAN
TITY AS AMOUNT
FROM PART, SUPPLIER, LINEITEM, PARTSUPP, ORDERS, NATION
```

```
WHERE S_SUPPKEY = L_SUPPKEY AND PS_SUPPKEY=
L_SUPPKEY AND PS_PARTKEY
= L_PARTKEY AND
P_PARTKEY= L_PARTKEY AND O_ORDERKEY = L_ORDERKEY
AND S_NATIONKEY =
N_NATIONKEY AND
P_NAME LIKE '%%green%%') AS PROFIT
GROUP BY NATION, O_YEAR
ORDER BY NATION, O_YEAR DESC;
```

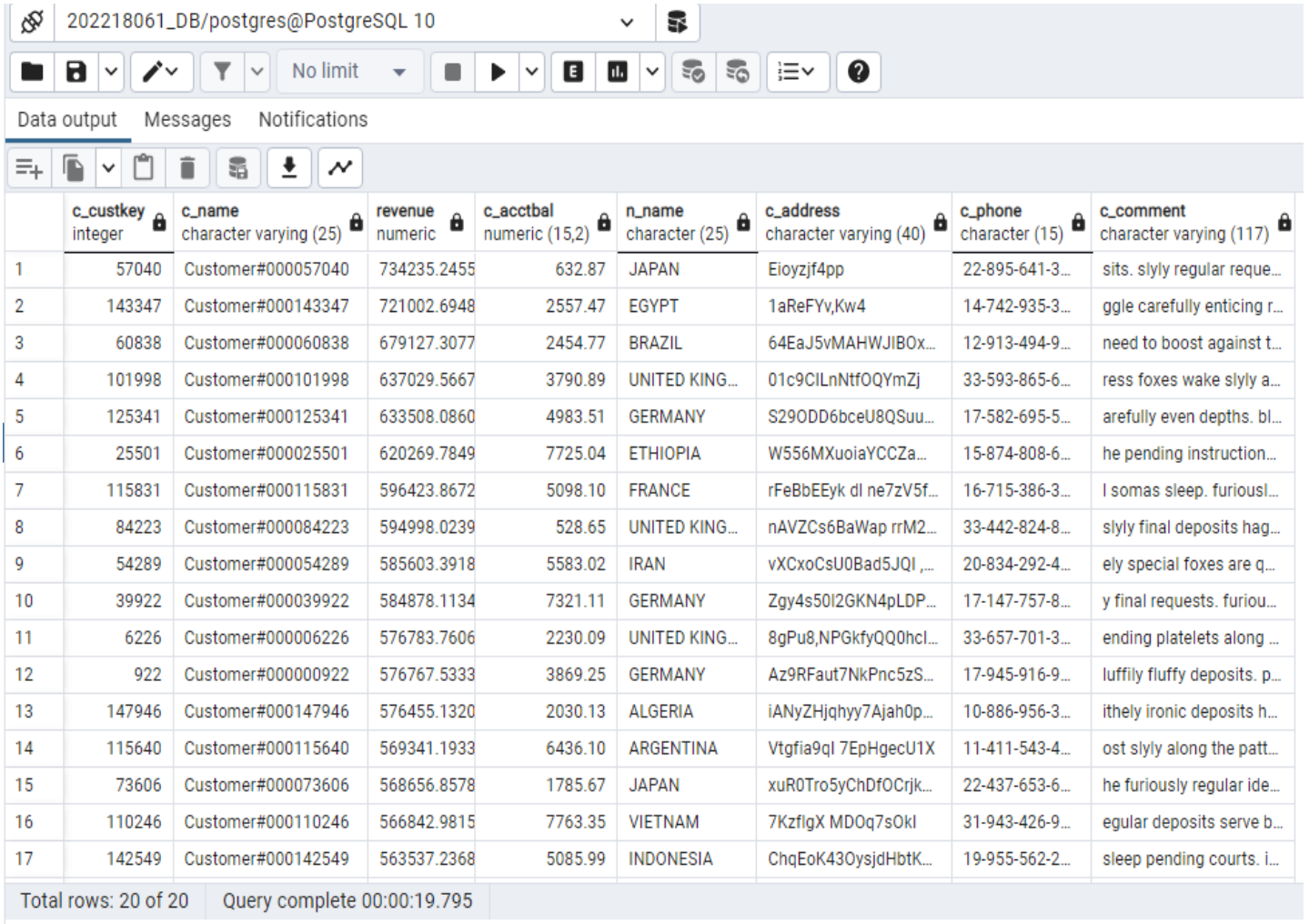
OUTPUT:



	nation character (25)	o_year double precision	sum_profit numeric
1	ALGERIA	1998	27136900.180
2	ALGERIA	1997	48611833.496
3	ALGERIA	1996	48285482.678
4	ALGERIA	1995	44402273.599
5	ALGERIA	1994	48694008.066
6	ALGERIA	1993	46044207.783
7	ALGERIA	1992	45636849.488
8	ARGENTINA	1998	28341663.784
9	ARGENTINA	1997	47143964.117
10	ARGENTINA	1996	45255278.602
11	ARGENTINA	1995	45631769.205
12	ARGENTINA	1994	48268856.354
13	ARGENTINA	1993	48605593.616
14	ARGENTINA	1992	46654240.748
15	BRAZIL	1998	26527736.396
16	BRAZIL	1997	45640660.767
17	BRAZIL	1996	45090647.163

Query 10 - Returned Item Reporting

```
SELECT C_CUSTKEY, C_NAME,
SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)) AS
REVENUE, C_ACCTBAL,
N_NAME, C_ADDRESS, C_PHONE, C_COMMENT
FROM CUSTOMER, ORDERS, LINEITEM, NATION
WHERE C_CUSTKEY = O_CUSTKEY AND L_ORDERKEY =
O_ORDERKEY AND
O_ORDERDATE>= '1993-10-01' AND
O_ORDERDATE < DATE '1993-10-01' + INTERVAL '3 MONTH' AND
L_RETURNFLAG = 'R' AND C_NATIONKEY = N_NATIONKEY
GROUP BY C_CUSTKEY, C_NAME, C_ACCTBAL, C_PHONE,
N_NAME, C_ADDRESS,
C_COMMENT
ORDER BY REVENUE DESC
```



	c_custkey integer	c_name character varying (25)	revenue numeric	c_acctbal numeric (15,2)	n_name character (25)	c_address character varying (40)	c_phone character (15)	c_comment character varying (117)
1	57040	Customer#000057040	734235.2455	632.87	JAPAN	Eioyzjf4pp	22-895-641-3...	sits. slyly regular reque...
2	143347	Customer#000143347	721002.6948	2557.47	EGYPT	1aReFYv,Kw4	14-742-935-3...	ggle carefully enticing r...
3	60838	Customer#000060838	679127.3077	2454.77	BRAZIL	64EaJ5vMAHWJIBOx...	12-913-494-9...	need to boost against t...
4	101998	Customer#000101998	637029.5667	3790.89	UNITED KING...	01c9CILnNtfOQYmZj	33-593-865-6...	ress foxes wake slyly a...
5	125341	Customer#000125341	633508.0860	4983.51	GERMANY	S29ODD6bceU8QSuu...	17-582-695-5...	arefully even depths. bl...
6	25501	Customer#000025501	620269.7849	7725.04	ETHIOPIA	W556MXuoiaYCCZa...	15-874-808-6...	he pending instruction...
7	115831	Customer#000115831	596423.8672	5098.10	FRANCE	rFeBbEEyk dl ne7zV5f...	16-715-386-3...	l somas sleep. furiousl...
8	84223	Customer#000084223	594998.0239	528.65	UNITED KING...	nAVZCs6BaWap rrM2...	33-442-824-8...	slyly final deposits hag...
9	54289	Customer#000054289	585603.3918	5583.02	IRAN	vXCxoCsU0Bad5JQI ,...	20-834-292-4...	ely special foxes are q...
10	39922	Customer#000039922	584878.1134	7321.11	GERMANY	Zgy4s50l2GKN4pLDP...	17-147-757-8...	y final requests. furiou...
11	6226	Customer#000006226	576783.7606	2230.09	UNITED KING...	8gPu8,NPGkfyQQ0hcl...	33-657-701-3...	ending platelets along ...
12	922	Customer#000000922	576767.5333	3869.25	GERMANY	Az9RFaut7NkPnc5zS...	17-945-916-9...	luffily fluffy deposits. p...
13	147946	Customer#000147946	576455.1320	2030.13	ALGERIA	iANyZHjqhyy7Ajah0p...	10-886-956-3...	ithely ironic deposits h...
14	115640	Customer#000115640	569341.1933	6436.10	ARGENTINA	Vtgfia9ql 7EpHgecU1X	11-411-543-4...	ost slyly along the patt...
15	73606	Customer#000073606	568656.8578	1785.67	JAPAN	xuR0Tro5yChDfOCrjk...	22-437-653-6...	he furiously regular ide...
16	110246	Customer#000110246	566842.9815	7763.35	VIETNAM	7KzfIgX MDOq7sOkI	31-943-426-9...	egular deposits serve b...
17	142549	Customer#000142549	563537.2368	5085.99	INDONESIA	ChqEoK43OysjdHbtK...	19-955-562-2...	sleep pending courts. i...

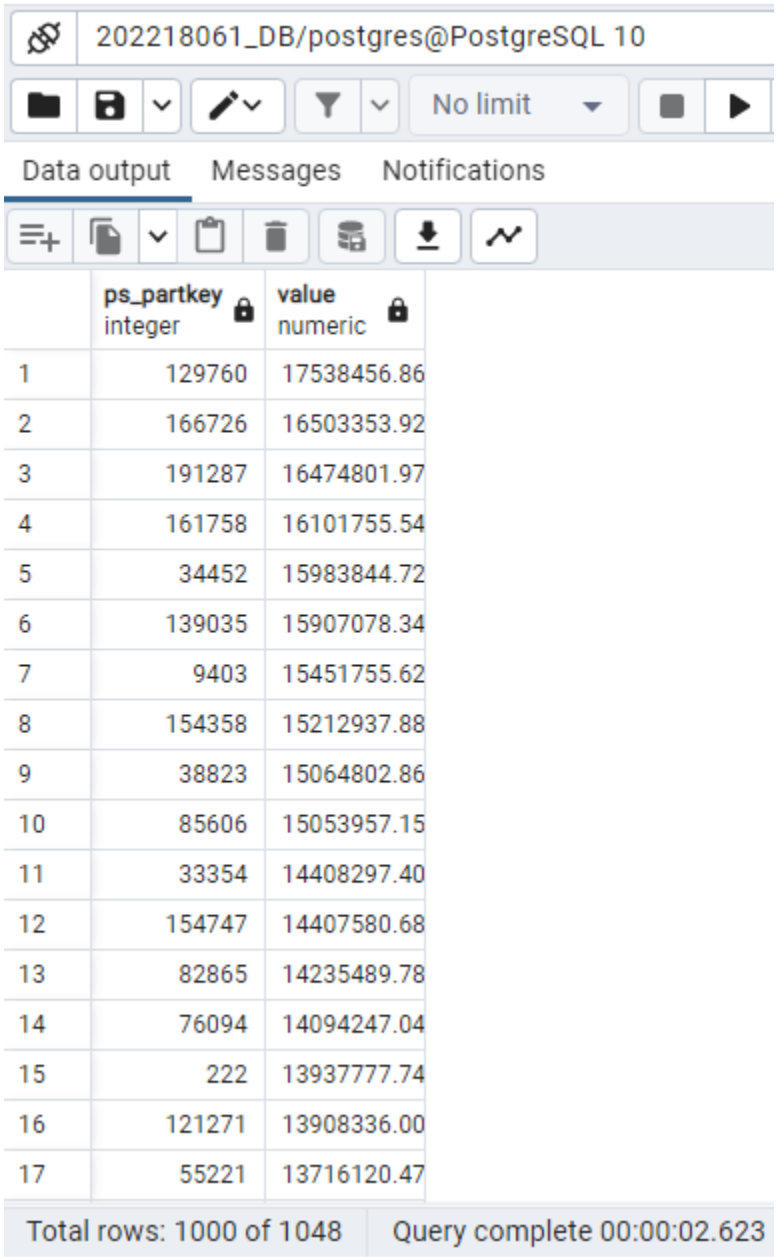
Total rows: 20 of 20 Query complete 00:00:19.795

/* TPC_H Query 11 - Important Stock Identification */

```
SELECT PS_PARTKEY, SUM(PS_SUPPLYCOST*PS_AVAILQTY) AS
VALUE
FROM PARTSUPP, SUPPLIER, NATION
WHERE PS_SUPPKEY = S_SUPPKEY AND S_NATIONKEY =
N_NATIONKEY AND N_NAME
= 'GERMANY'
GROUP BY PS_PARTKEY
HAVING SUM(PS_SUPPLYCOST*PS_AVAILQTY) > (SELECT
SUM(PS_SUPPLYCOST*PS_AVAILQTY) *
0.0001000000
```

```
FROM PARTSUPP, SUPPLIER, NATION
WHERE PS_SUPPKEY = S_SUPPKEY AND S_NATIONKEY =
N_NATIONKEY AND N_NAME
= 'GERMANY')
ORDER BY VALUE DESC;
```

OUTPUT:



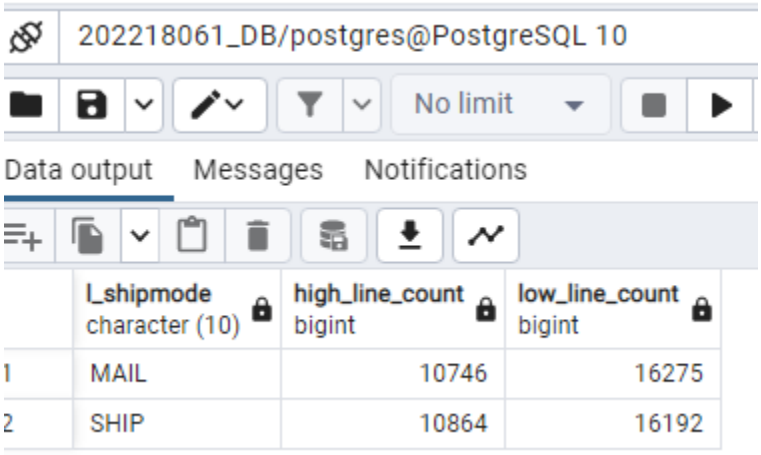
	ps_partkey integer	value numeric
1	129760	17538456.86
2	166726	16503353.92
3	191287	16474801.97
4	161758	16101755.54
5	34452	15983844.72
6	139035	15907078.34
7	9403	15451755.62
8	154358	15212937.88
9	38823	15064802.86
10	85606	15053957.15
11	33354	14408297.40
12	154747	14407580.68
13	82865	14235489.78
14	76094	14094247.04
15	222	13937777.74
16	121271	13908336.00
17	55221	13716120.47

Total rows: 1000 of 1048 Query complete 00:00:02.623

Query 12 - Shipping Modes and Order Priority

```
SELECT L_SHIPMODE,
SUM(CASE WHEN O_ORDERPRIORITY = '1-URGENT' OR
O_ORDERPRIORITY = '2-HIGH'
THEN 1 ELSE 0
END) AS HIGH_LINE_COUNT,
SUM(CASE WHEN O_ORDERPRIORITY <> '1-URGENT' AND
O_ORDERPRIORITY <>
'2-HIGH' THEN 1 ELSE 0
END ) AS LOW_LINE_COUNT
FROM ORDERS, LINEITEM
WHERE O_ORDERKEY = L_ORDERKEY AND L_SHIPMODE IN
('MAIL','SHIP')
AND L_COMMITDATE < L_RECEIPTDATE AND L_SHIPDATE <
L_COMMITDATE AND
L_RECEIPTDATE >=
'1994-01-01'
AND L_RECEIPTDATE < DATE '1995-09-01' + INTERVAL '1 MONTH'
GROUP BY L_SHIPMODE
ORDER BY L_SHIPMODE;
```

OUTPUT:



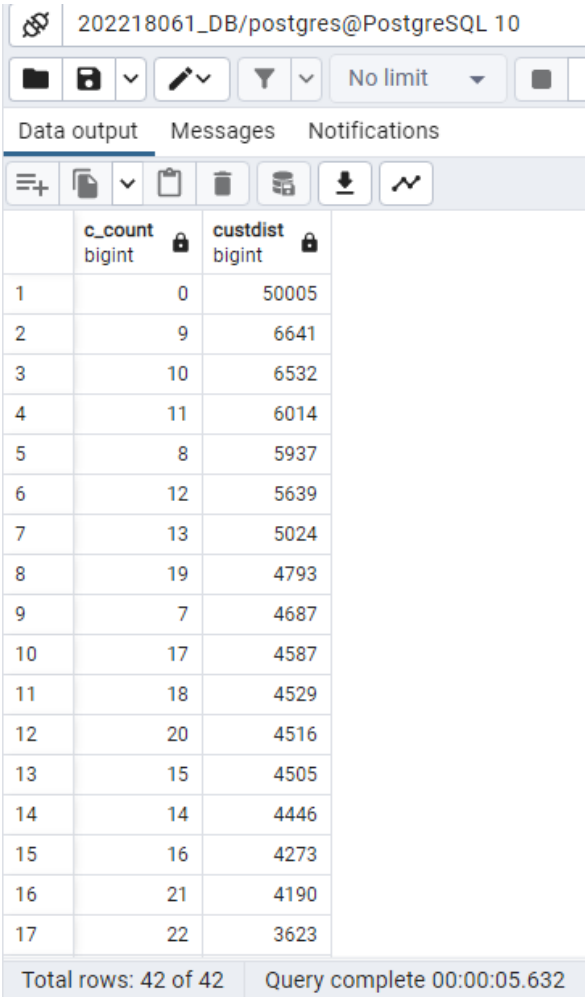
	l_shipmode character (10)	high_line_count bigint	low_line_count bigint
1	MAIL	10746	16275
2	SHIP	10864	16192

Total rows: 2 of 2 | Query complete 00:00:18.789

Query 13 - Customer Distribution

```
SELECT C_COUNT, COUNT(*) AS CUSTDIST
FROM (SELECT C_CUSTKEY, COUNT(O_ORDERKEY)
FROM CUSTOMER left outer join ORDERS on C_CUSTKEY =
O_CUSTKEY
AND O_COMMENT not like '%%special%%requests%%'
GROUP BY C_CUSTKEY) AS C_ORDERS (C_CUSTKEY,
C_COUNT)
GROUP BY C_COUNT
ORDER BY CUSTDIST DESC, C_COUNT DESC;
```

OUTPUT:



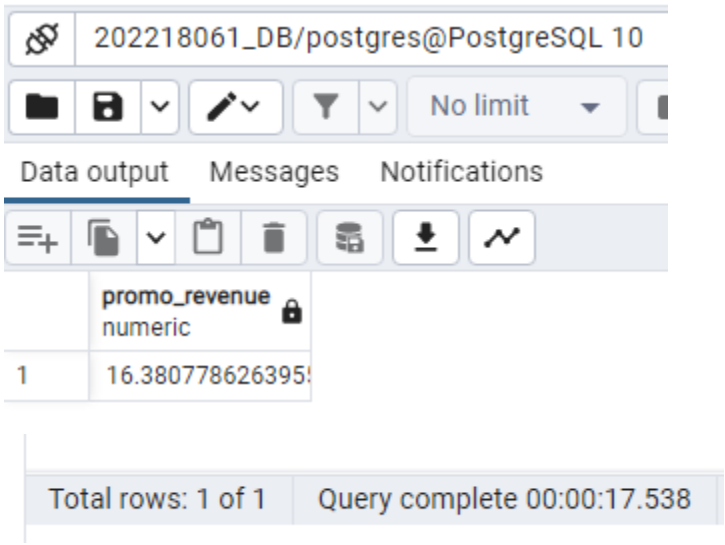
	c_count bigint	custdist bigint
1	0	50005
2	9	6641
3	10	6532
4	11	6014
5	8	5937
6	12	5639
7	13	5024
8	19	4793
9	7	4687
10	17	4587
11	18	4529
12	20	4516
13	15	4505
14	14	4446
15	16	4273
16	21	4190
17	22	3623

Total rows: 42 of 42 | Query complete 00:00:05.632

/* TPC_H Query 14 - Promotion Effect */

```
SELECT 100.00* SUM(CASE WHEN P_TYPE LIKE 'PROMO%%'
THEN
L_EXTENDEDPRICE*(1-L_DISCOUNT)
ELSE 0 END) / SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)) AS
PROMO_REVENUE
FROM LINEITEM, PART
WHERE L_PARTKEY = P_PARTKEY AND L_SHIPDATE >=
'1995-09-01' AND L_SHIPDATE <
DATE '1995-09-
01' + INTERVAL '1 MONTH';
```

OUTPUT:

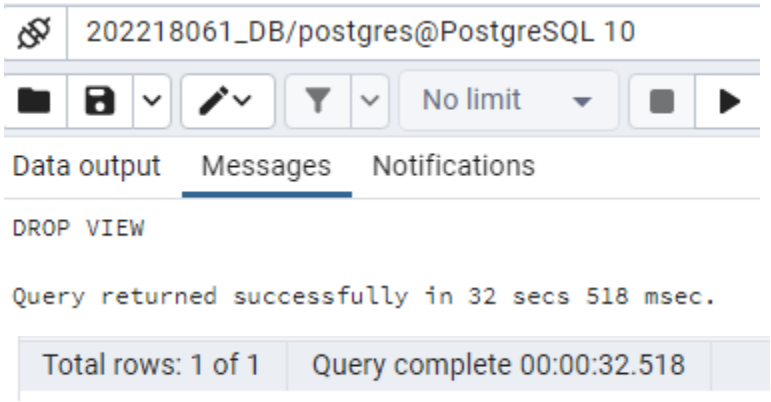


/* TPC_H Query 15 - Create View for Top Supplier Query */

```
CREATE VIEW REVENUE0 (SUPPLIER_NO, TOTAL_REVENUE) AS
SELECT L_SUPPKEY,
SUM(L_EXTENDEDPRICE*(1-L_DISCOUNT)) FROM LINEITEM
```

```
WHERE L_SHIPDATE >= '1996-01-01' AND L_SHIPDATE < DATE
'1996-01-01' + INTERVAL '3
MONTH'
GROUP BY L_SUPPKEY;
SELECT S_SUPPKEY, S_NAME, S_ADDRESS, S_PHONE,
TOTAL_REVENUE
FROM SUPPLIER, REVENUE0
WHERE S_SUPPKEY = SUPPLIER_NO AND TOTAL_REVENUE =
(SELECT
MAX(TOTAL_REVENUE) FROM
REVENUE0)
ORDER BY S_SUPPKEY;
DROP VIEW REVENUE0;
```

OUTPUT:

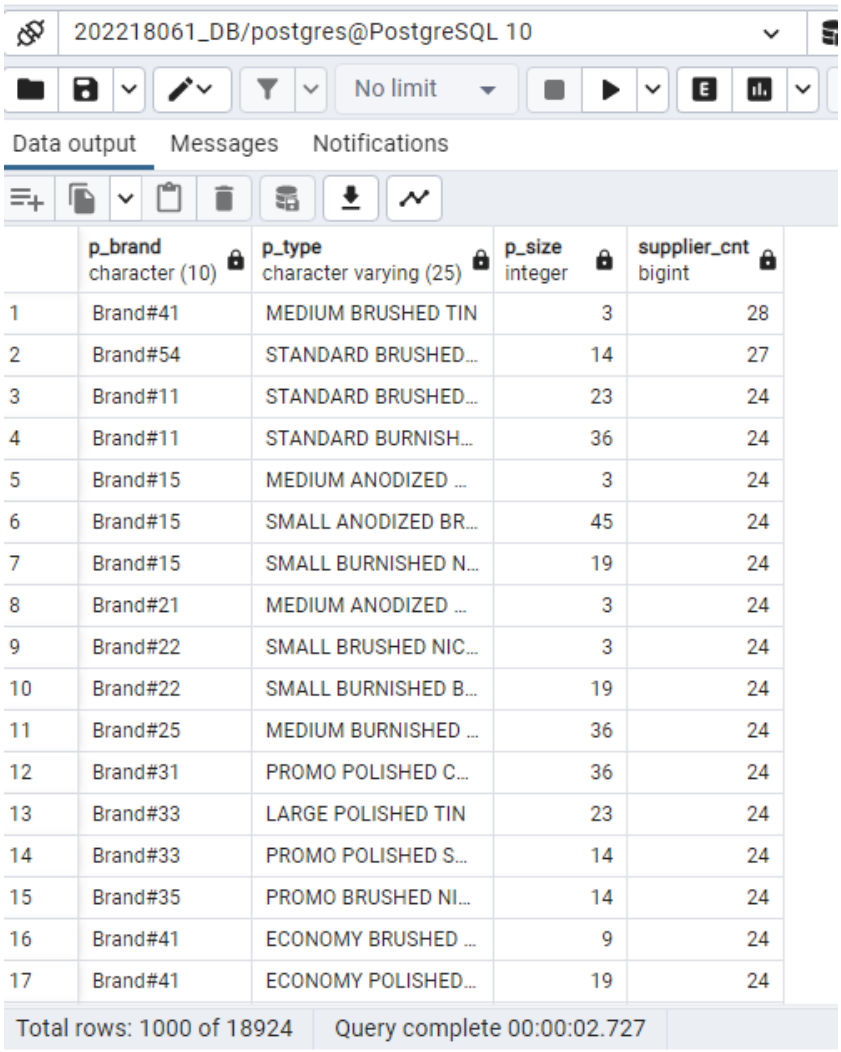


/* TPC_H Query 16 - Parts/Supplier Relationship */

```
SELECT P_BRAND, P_TYPE, P_SIZE, COUNT(DISTINCT
PS_SUPPKEY) AS
SUPPLIER_CNT
FROM PARTSUPP, PART
WHERE P_PARTKEY = PS_PARTKEY AND P_BRAND <>
'Brand#45' AND P_TYPE NOT LIKE
'MEDIUM
```

```
POLISHED%%'
AND P_SIZE IN (49, 14, 23, 45, 19, 3, 36, 9) AND PS_SUPPKEY
NOT IN (SELECT
S_SUPPKEY FROM
SUPPLIER
WHERE S_COMMENT LIKE '%%Customer%%Complaints%%')
GROUP BY P_BRAND, P_TYPE, P_SIZE
ORDER BY SUPPLIER_CNT DESC, P_BRAND, P_TYPE, P_SIZE;
```

OUTPUT:

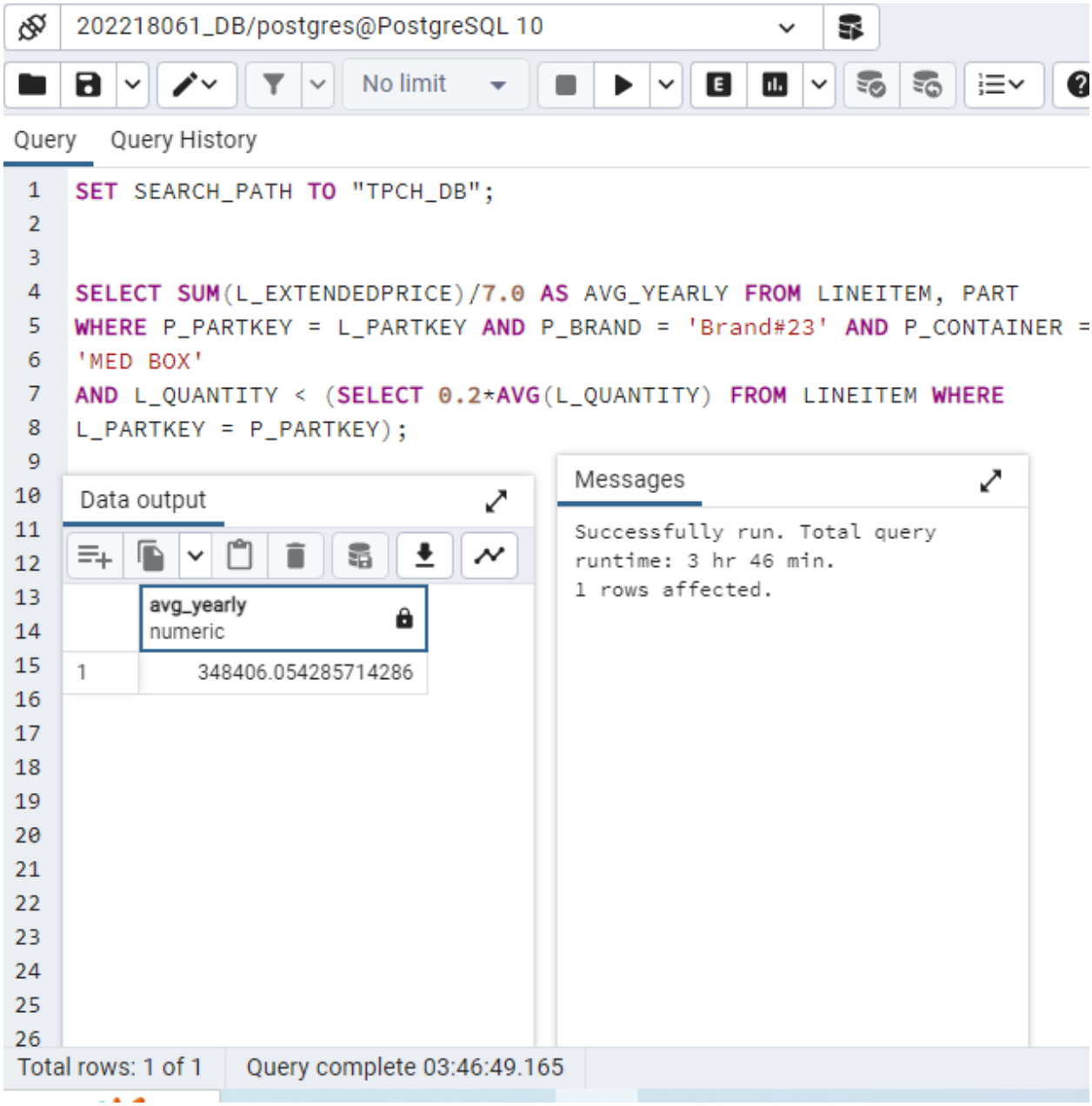


	p_brand character (10)	p_type character varying (25)	p_size integer	supplier_cnt bigint
1	Brand#41	MEDIUM BRUSHED TIN	3	28
2	Brand#54	STANDARD BRUSHED...	14	27
3	Brand#11	STANDARD BRUSHED...	23	24
4	Brand#11	STANDARD BURNISH...	36	24
5	Brand#15	MEDIUM ANODIZED ...	3	24
6	Brand#15	SMALL ANODIZED BR...	45	24
7	Brand#15	SMALL BURNISHED N...	19	24
8	Brand#21	MEDIUM ANODIZED ...	3	24
9	Brand#22	SMALL BRUSHED NIC...	3	24
10	Brand#22	SMALL BURNISHED B...	19	24
11	Brand#25	MEDIUM BURNISHED ...	36	24
12	Brand#31	PROMO POLISHED C...	36	24
13	Brand#33	LARGE POLISHED TIN	23	24
14	Brand#33	PROMO POLISHED S...	14	24
15	Brand#35	PROMO BRUSHED NI...	14	24
16	Brand#41	ECONOMY BRUSHED ...	9	24
17	Brand#41	ECONOMY POLISHED...	19	24

/* TPC_H Query 17 - Small-Quantity-Order Revenue */

```
SELECT SUM(L_EXTENDEDPRICE)/7.0
AS AVG_YEARLY
 FROM LINEITEM, PART
WHERE P_PARTKEY = L_PARTKEY AND P_BRAND = 'Brand#23'
AND P_CONTAINER =
'MED BOX'
AND L_QUANTITY < (SELECT 0.2*AVG(L_QUANTITY)
 FROM LINEITEM
WHERE
L_PARTKEY = P_PARTKEY);
```

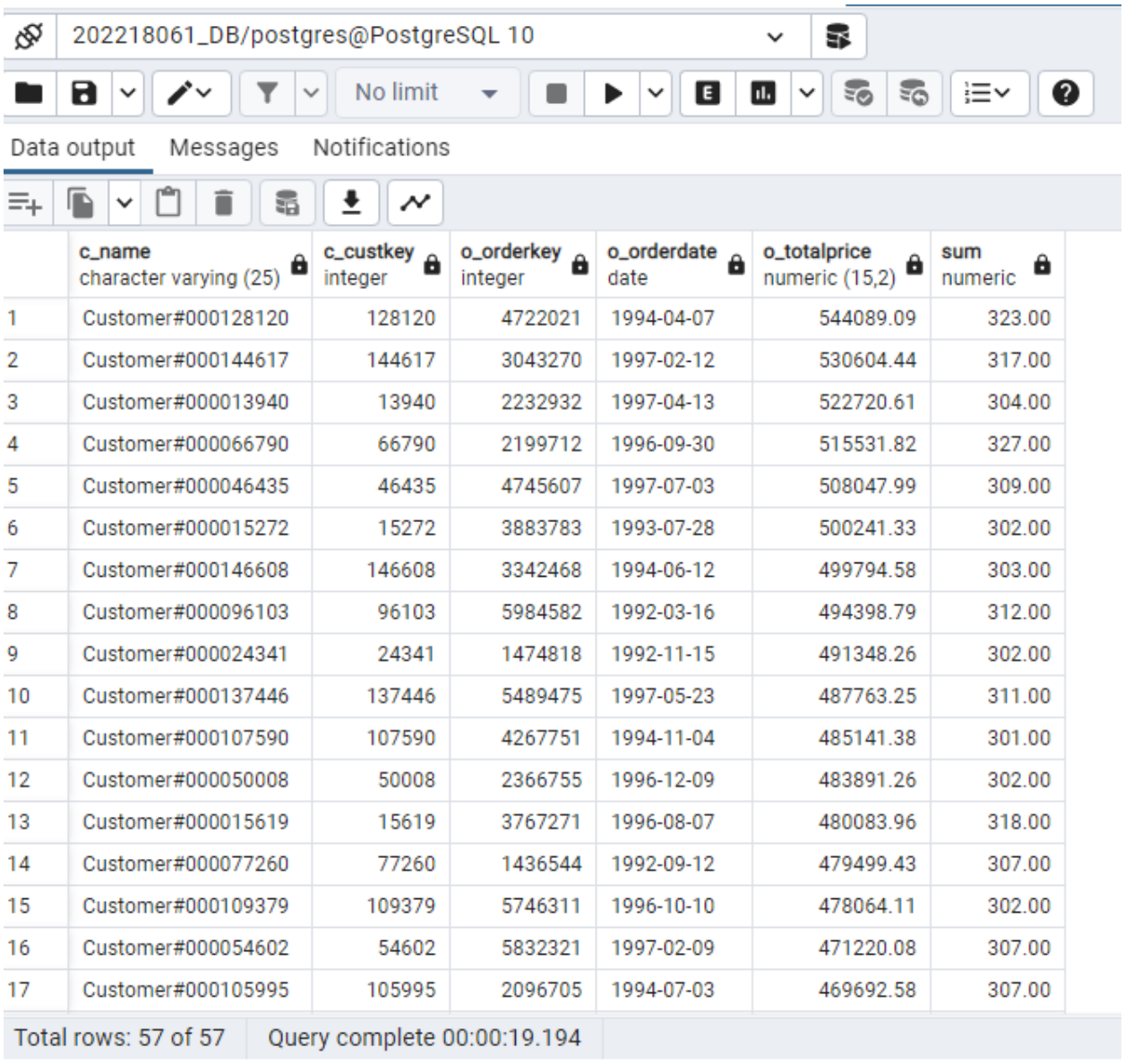
OUTPUT:



/* TPC_H Query 18 - Large Volume Customer */

SELECT C_NAME, C_CUSTKEY, O_ORDERKEY, O_ORDERDATE, O_TOTALPRICE,
SUM(L_QUANTITY)
FROM CUSTOMER, ORDERS, LINEITEM
WHERE O_ORDERKEY IN (SELECT L_ORDERKEY FROM LINEITEM GROUP BY

```
L_ORDERKEY HAVING
SUM(L_QUANTITY) > 300) AND C_CUSTKEY = O_CUSTKEY AND
O_ORDERKEY =
L_ORDERKEY
GROUP BY C_NAME, C_CUSTKEY, O_ORDERKEY,
O_ORDERDATE, O_TOTALPRICE
ORDER BY O_TOTALPRICE DESC, O_ORDERDATE LIMIT 100;
```

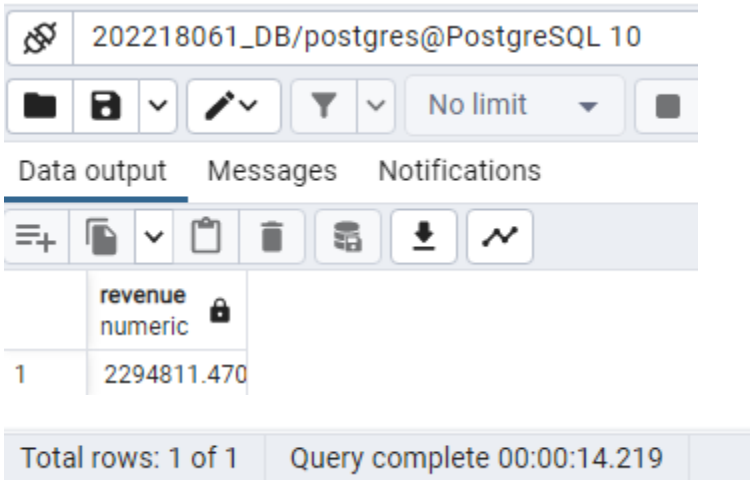


	c_name character varying (25)	c_custkey integer	o_orderkey integer	o_orderdate date	o_totalprice numeric (15,2)	sum numeric
1	Customer#000128120	128120	4722021	1994-04-07	544089.09	323.00
2	Customer#000144617	144617	3043270	1997-02-12	530604.44	317.00
3	Customer#000013940	13940	2232932	1997-04-13	522720.61	304.00
4	Customer#000066790	66790	2199712	1996-09-30	515531.82	327.00
5	Customer#000046435	46435	4745607	1997-07-03	508047.99	309.00
6	Customer#000015272	15272	3883783	1993-07-28	500241.33	302.00
7	Customer#000146608	146608	3342468	1994-06-12	499794.58	303.00
8	Customer#000096103	96103	5984582	1992-03-16	494398.79	312.00
9	Customer#000024341	24341	1474818	1992-11-15	491348.26	302.00
10	Customer#000137446	137446	5489475	1997-05-23	487763.25	311.00
11	Customer#000107590	107590	4267751	1994-11-04	485141.38	301.00
12	Customer#000050008	50008	2366755	1996-12-09	483891.26	302.00
13	Customer#000015619	15619	3767271	1996-08-07	480083.96	318.00
14	Customer#000077260	77260	1436544	1992-09-12	479499.43	307.00
15	Customer#000109379	109379	5746311	1996-10-10	478064.11	302.00
16	Customer#000054602	54602	5832321	1997-02-09	471220.08	307.00
17	Customer#000105995	105995	2096705	1994-07-03	469692.58	307.00

Total rows: 57 of 57 | Query complete 00:00:19.194

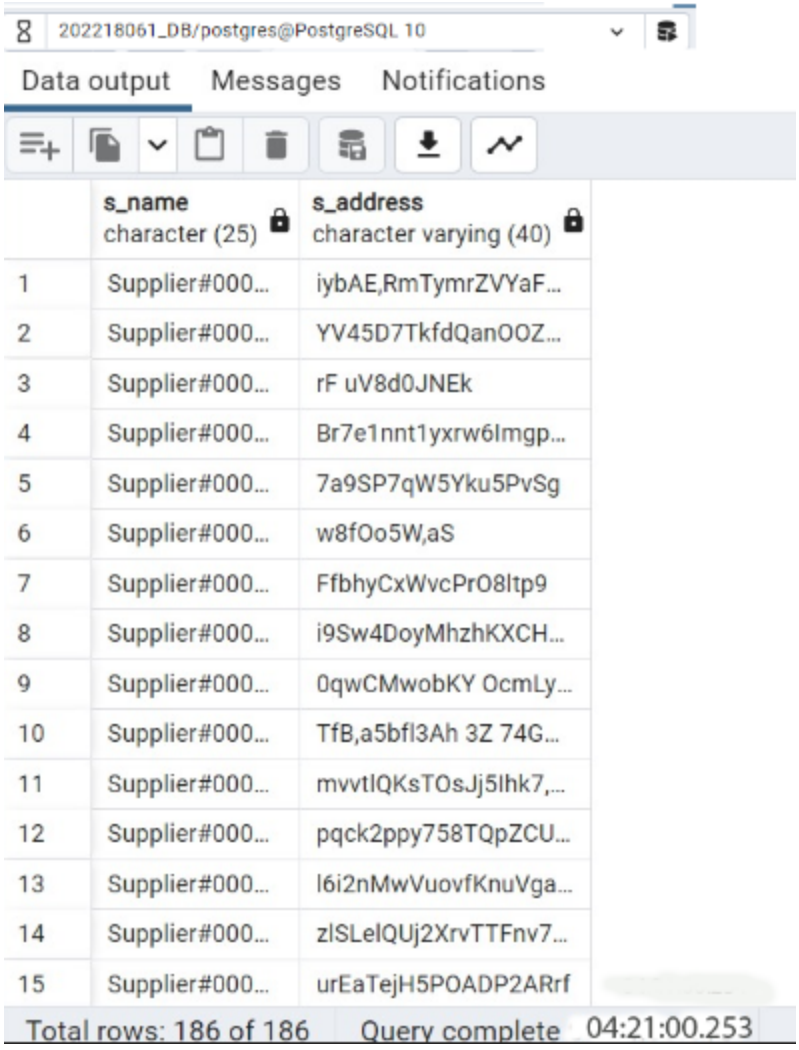
```
/* TPC_H Query 19 - Discounted Revenue */
SELECT SUM(L_EXTENDEDPRICE* (1 - L_DISCOUNT)) AS
REVENUE
FROM LINEITEM, PART
WHERE (P_PARTKEY = L_PARTKEY AND P_BRAND = 'Brand#12'
AND P_CONTAINER IN
('SM CASE', 'SM
BOX', 'SM PACK', 'SM PKG') AND L_QUANTITY >= 1 AND
L_QUANTITY <= 1 + 10 AND
P_SIZE BETWEEN 1
AND 5
AND L_SHIPMODE IN ('AIR', 'AIR REG') AND L_SHIPINSTRUCT =
'DELIVER IN PERSON')
OR (P_PARTKEY = L_PARTKEY AND P_BRAND ='Brand#23' AND
P_CONTAINER IN ('MED
BAG', 'MED
BOX', 'MED PKG', 'MED PACK') AND L_QUANTITY >=10 AND
L_QUANTITY <=10 + 10 AND
P_SIZE
BETWEEN 1 AND 10
AND L_SHIPMODE IN ('AIR', 'AIR REG') AND L_SHIPINSTRUCT =
'DELIVER IN PERSON')
OR (P_PARTKEY = L_PARTKEY AND P_BRAND = 'Brand#34' AND
P_CONTAINER IN ( 'LG
CASE', 'LG BOX',
'LG PACK', 'LG PKG') AND L_QUANTITY >=20 AND L_QUANTITY
<= 20 + 10 AND P_SIZE
BETWEEN 1 AND
15
AND L_SHIPMODE IN ('AIR', 'AIR REG') AND L_SHIPINSTRUCT =
'DELIVER IN PERSON');
```

OUTPUT:



/* TPC_H Query 20 - Potential Part Promotion */

```
SELECT S_NAME, S_ADDRESS FROM SUPPLIER, NATION
WHERE S_SUPPKEY IN (SELECT PS_SUPPKEY FROM
PARTSUPP
WHERE PS_PARTKEY in (SELECT P_PARTKEY FROM PART
WHERE P_NAME like
'forest%%') AND
PS_AVAILQTY > (SELECT 0.5*sum(L_QUANTITY) FROM LINEITEM
WHERE L_PARTKEY =
PS_PARTKEY AND
L_SUPPKEY = PS_SUPPKEY AND L_SHIPDATE >= '1994-01-01'
AND
L_SHIPDATE < DATE '1994-01-01' + INTERVAL '1 YEAR')) AND
S_NATIONKEY =
N_NATIONKEY AND
N_NAME = 'CANADA'
ORDER BY S_NAME;
```



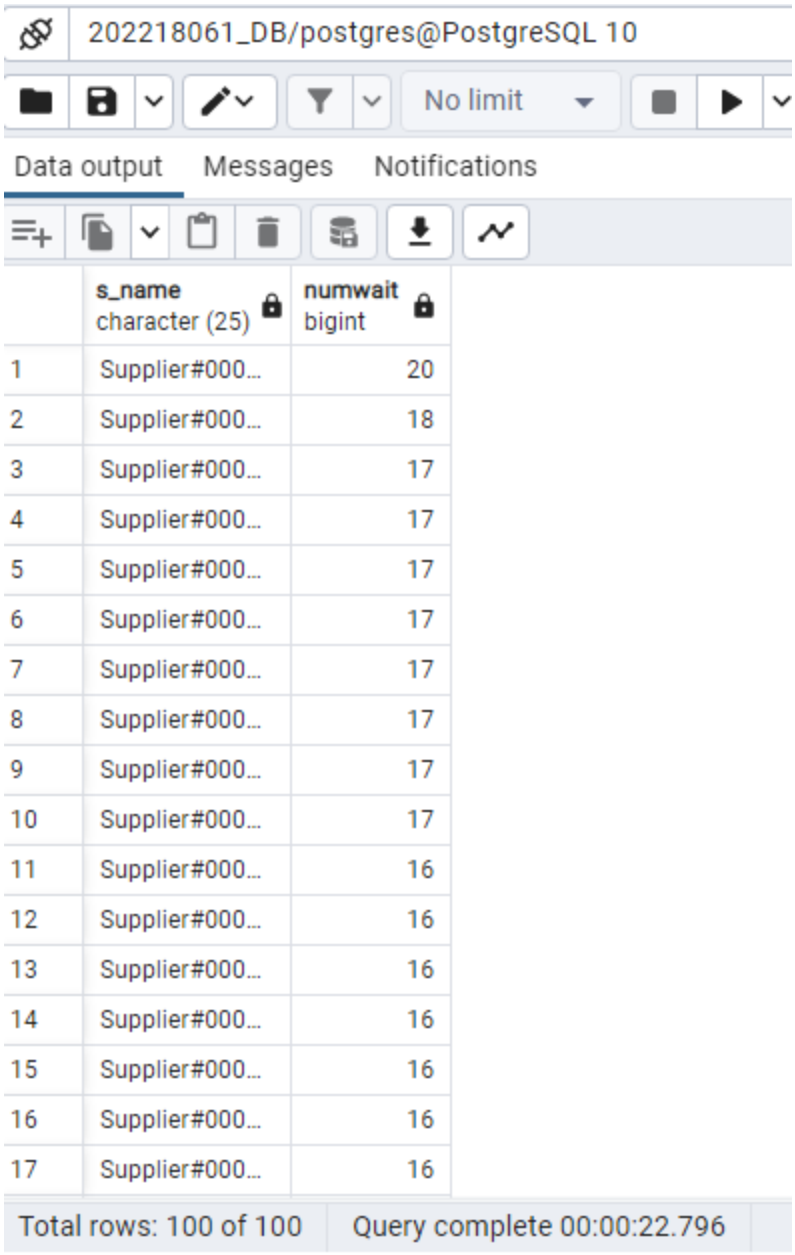
	s_name character (25)	s_address character varying (40)
1	Supplier#000...	iybAE,RmTymrZVYaF...
2	Supplier#000...	YV45D7TkfdQanOOZ...
3	Supplier#000...	rF uV8d0JNEk
4	Supplier#000...	Br7e1nnt1yxrw6Imgp...
5	Supplier#000...	7a9SP7qW5Yku5PvSg
6	Supplier#000...	w8fOo5W,aS
7	Supplier#000...	FfbhyCxWvcPrO8ltp9
8	Supplier#000...	i9Sw4DoyMhzhKXCH...
9	Supplier#000...	0qwCMwobKY OcmLy...
10	Supplier#000...	TfB,a5bfl3Ah 3Z 74G...
11	Supplier#000...	mvvtlQKsTOsJj5lhk7,...
12	Supplier#000...	pqck2ppy758TQpZCU...
13	Supplier#000...	l6i2nMwVuovfKnuVga...
14	Supplier#000...	zlSLelQUj2XrvTTFnv7...
15	Supplier#000...	urEaTejH5POADP2ARrf

/* TPC_H Query 21 - Suppliers Who Kept Orders Waiting */

```
SELECT S_NAME, COUNT(*) AS NUMWAIT
FROM SUPPLIER, LINEITEM L1, ORDERS, NATION WHERE
S_SUPPKEY = L1.L_SUPPKEY
AND
O_ORDERKEY = L1.L_ORDERKEY AND O_ORDERSTATUS = 'F'
AND L1.L_RECEIPTDATE>
L1.L_COMMITDATE
AND EXISTS (SELECT * FROM LINEITEM L2 WHERE
L2.L_ORDERKEY = L1.L_ORDERKEY
AND L2.L_SUPPKEY <> L1.L_SUPPKEY) AND
```

```
NOT EXISTS (SELECT * FROM LINEITEM L3 WHERE
L3.L_ORDERKEY = L1.L_ORDERKEY
AND
L3.L_SUPPKEY <> L1.L_SUPPKEY AND L3.L_RECEIPTDATE >
L3.L_COMMITDATE) AND
S_NATIONKEY = N_NATIONKEY AND N_NAME = 'SAUDI ARABIA'
GROUP BY S_NAME
ORDER BY NUMWAIT DESC, S_NAME LIMIT 100;
```

OUTPUT:

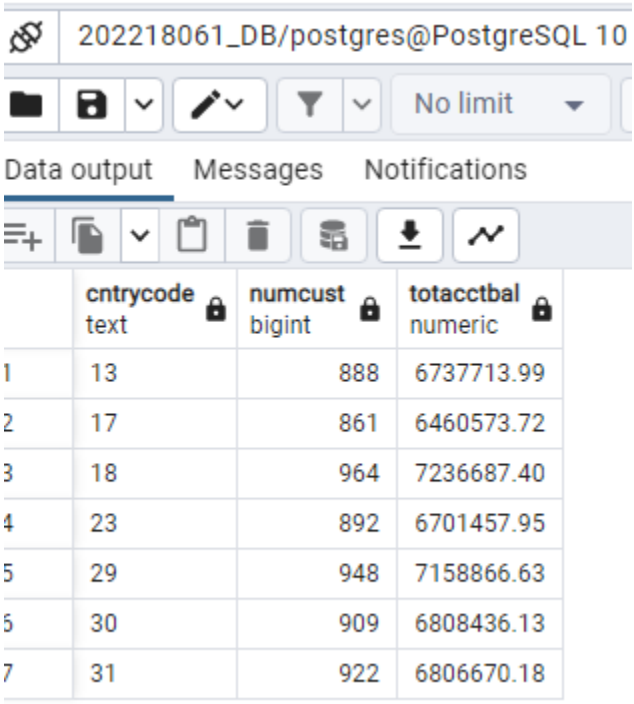


/* TPC_H Query 22 - Global Sales Opportunity */

```
SELECT CNTRYCODE, COUNT(*) AS NUMCUST,
SUM(C_ACCTBAL) AS TOTACCTBAL
FROM (SELECT SUBSTRING(C_PHONE,1,2) AS CNTRYCODE,
C_ACCTBAL
FROM CUSTOMER WHERE SUBSTRING(C_PHONE,1,2) IN ('13',
'31', '23', '29', '30', '18', '17')
```

```
AND
C_ACCTBAL > (SELECT AVG(C_ACCTBAL) FROM CUSTOMER
WHERE C_ACCTBAL >
0.00 AND
SUBSTRING(C_PHONE,1,2) IN ('13', '31', '23', '29', '30', '18', '17'))
AND
NOT EXISTS ( SELECT * FROM ORDERS WHERE O_CUSTKEY =
C_CUSTKEY)) AS
CUSTSALE
GROUP BY CNTRYCODE
ORDER BY CNTRYCODE;
```

OUTPUT:



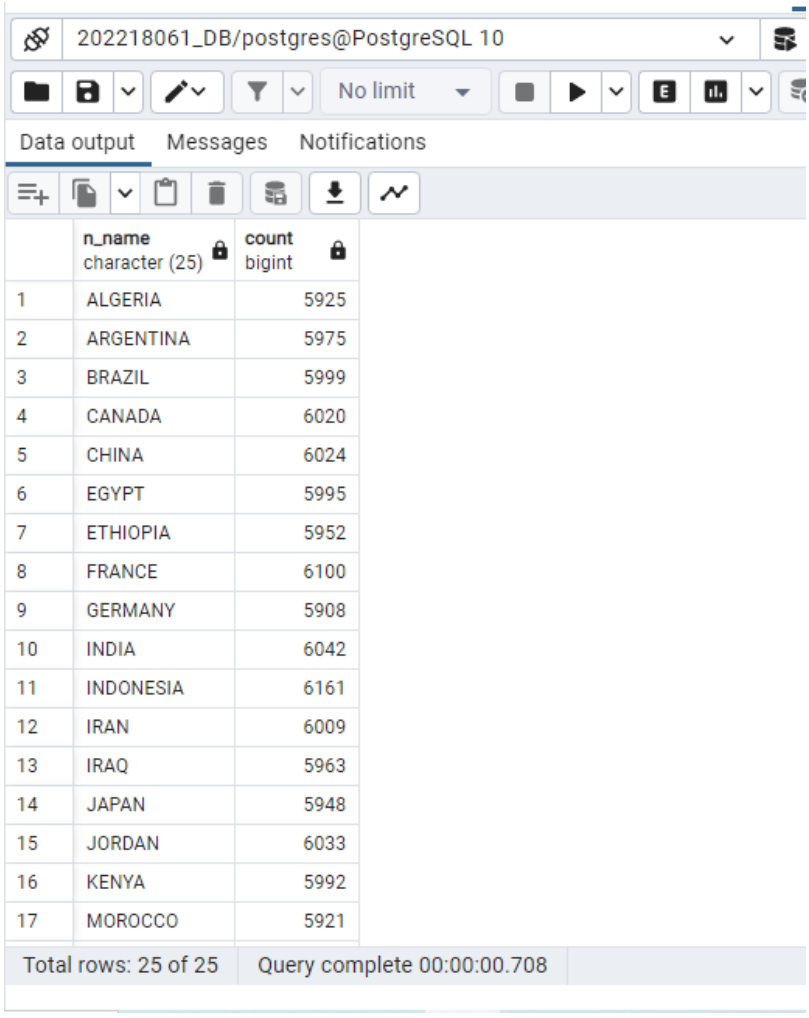
	cntrycode text	numcust bigint	totacctbal numeric
1	13	888	6737713.99
2	17	861	6460573.72
3	18	964	7236687.40
4	23	892	6701457.95
5	29	948	7158866.63
6	30	909	6808436.13
7	31	922	6806670.18

Total rows: 7 of 7 | Query complete 00:00:02.541

2. Write and execute SQL Queries for the following requirements:

a. Find the number of customers for each country.

```
SELECT N.N_NAME,
COUNT (C.C_CUSTKEY)
FROM CUSTOMER C
LEFT JOIN NATION N
 ON C.c_nationkey = N.n_nationkey
GROUP BY N_NAME;
```



	n_name character (25)	count bigint
1	ALGERIA	5925
2	ARGENTINA	5975
3	BRAZIL	5999
4	CANADA	6020
5	CHINA	6024
6	EGYPT	5995
7	ETHIOPIA	5952
8	FRANCE	6100
9	GERMANY	5908
10	INDIA	6042
11	INDONESIA	6161
12	IRAN	6009
13	IRAQ	5963
14	JAPAN	5948
15	JORDAN	6033
16	KENYA	5992
17	MOROCCO	5921

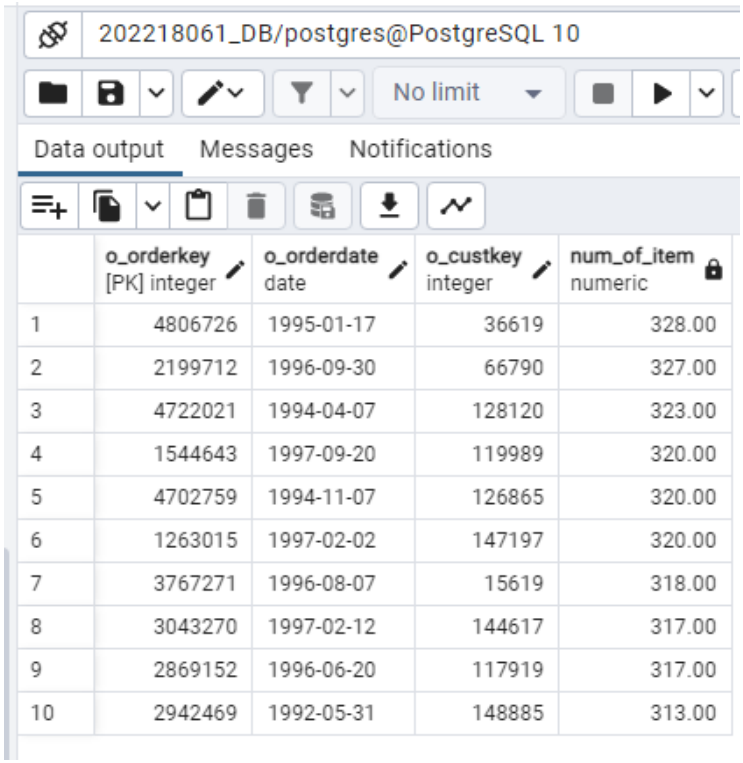
Total rows: 25 of 25 Query complete 00:00:00.708

17	MOROCCO	5921
18	MOZAMBIQUE	5974
19	PERU	5975
20	ROMANIA	6100
21	RUSSIA	6078
22	SAUDI ARABIA	5904
23	UNITED KING...	6011
24	UNITED STAT...	5983
25	VIETNAM	6008
Total rows: 25 of 25	Query complete 00:00:00.708	

b. Find the top 10 orders having most items in their orders. Show orderid, date, customerid and count of items in that order.

QUERY:

```
SELECT O.o_orderkey,O.o_orderdate,O.o_custkey,
SUM(L.l_quantity)
AS Num_of_Item
FROM orders O JOIN lineitem L
ON O.o_orderkey =L.l_orderkey
GROUP BY O.o_orderkey
ORDER BY SUM(L.l_quantity)
DESC
LIMIT 10;
```

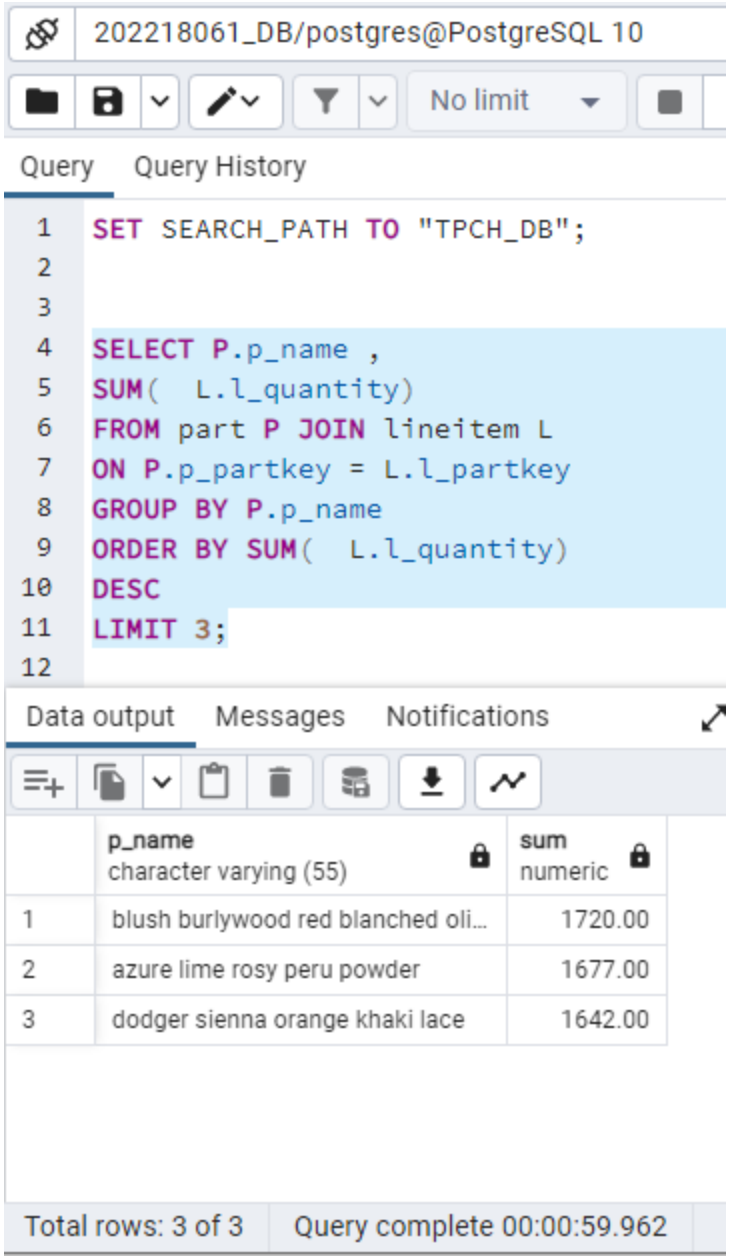


	o_orderkey [PK] integer	o_orderdate date	o_custkey integer	num_of_item numeric
1	4806726	1995-01-17	36619	328.00
2	2199712	1996-09-30	66790	327.00
3	4722021	1994-04-07	128120	323.00
4	1544643	1997-09-20	119989	320.00
5	4702759	1994-11-07	126865	320.00
6	1263015	1997-02-02	147197	320.00
7	3767271	1996-08-07	15619	318.00
8	3043270	1997-02-12	144617	317.00
9	2869152	1996-06-20	117919	317.00
10	2942469	1992-05-31	148885	313.00

Total rows: 10 of 10 | Query complete 00:00:45.453

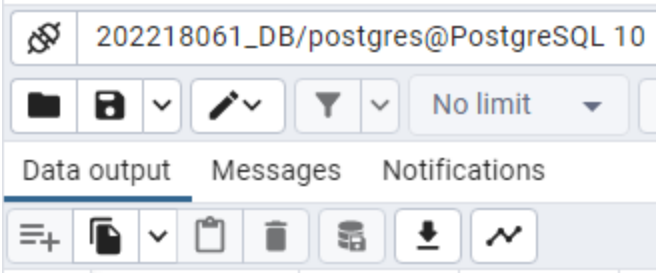
c. Find top 3 parts names and show the count based on the most sold
Basis.

```
SELECT P.p_name ,
SUM(  L.l_quantity)
FROM part P JOIN lineitem L
ON P.p_partkey = L.l_partkey
GROUP BY P.p_name
ORDER BY SUM(  L.l_quantity)
DESC
LIMIT 3;
```



d. Find the total amount of orders received from each country. Show
country name, total money amount of orders and order count sorted
by highest first.

```
SELECT N.n_name, sum(O.o_totalprice) AS tot_amount_of_orders,
count(O.o_orderkey)
FROM nation N
JOIN customer C
ON N.n_nationkey = C.c_nationkey
JOIN orders O
ON C.c_custkey = O.o_custkey
GROUP BY N.n_name
ORDER BY  count(O.o_orderkey)
DESC;
```



	n_name character (25)	sum numeric	count bigint
1	FRANCE	9318715232.	61600
2	RUSSIA	9282323186.	61495
3	INDONESIA	9300830039.	61377
4	MOZAMBIQUE	9249114609.	61267
5	ROMANIA	9196280024.	61012
6	CHINA	9161685172.	60784
7	JORDAN	9229296044.	60736
8	CANADA	9143635385.	60480
9	VIETNAM	9121689438.	60347
10	BRAZIL	9107367126.	60137
11	UNITED STAT...	9086969258.	59921
12	INDIA	9035791922.	59827
13	GERMANY	9039194008.	59724
14	ETHIOPIA	9032642974.	59706
15	IRAN	9025552858.	59675
16	ALGERIA	9065723966.	59622
17	ARGENTINA	9022490350.	59547
18	MOROCCO	8985579085.	59459
19	UNITED KING...	8956753007.	59455
20	JAPAN	8993418470.	59405
21	EGYPT	8925726169.	59111
22	PERU	8946481134.	59018
23	KENYA	8897163266.	58940
24	IRAQ	8892603095.	58902
25	SAUDI ARABIA	8812280619.	58453

Total rows: 25 of 25 Query complete 00:00:05.938