

OUTPUT SCREENSHOTS

1. SELECT, WHERE COMMAND

The screenshot shows the SQL Server Management Studio interface. In the top pane, a query is written:

```
1 • CREATE DATABASE ecommerce_db;
2 • Use ecommerce_db;
3 -- List customers from the state of SP--
4 • SELECT * FROM olist_customers WHERE customer_state = 'SP';
5
```

In the bottom pane, the results of the query are displayed in a grid:

customer_id	customer_unique_id	customer_zip_code_prefix	customer_city	customer_state
06b8999e2fba1a1fbc88172c00ba8bc7	861eff4711a542e4b93843c6dd7febb0	14409	franca	SP
18955e83d337fd6b2def6b18a428ac77	290c77bc529b7ac935b93aa66c333dc3	9790	sao bernardo do campo	SP
4e7b3e00288586ebd08712fdd0374a03	060e732b5b29e8181a18229c7b0b2b5e	1151	sao paulo	SP
b2b6027bc5c5109e529d4dc6358b12c3	259dac757896d24d7702b9acbfff3f3c	8775	mogi das cruzes	SP
4f2d8ab171c80ec8364f7c12e35b23ad	345ecd01c38d18a9036ed96c73b8d066	13056	campinas	SP
fd826e7cf63160e536e0908c76c3f441	addec96d2e059c80c30fe6871d30d177	4534	sao paulo	SP
b2d1536598b73a9abd18e0d75d92f0a3	918dc87cd72cd9f6ed4bd442ed785235	18682	lencois paulista	SP
eabebad39a88bb6f5b52376faec28612	295c05e81917928d76245e842748184d	5704	sao paulo	SP
206f3129c0e4d7d0b9550426023f0a08	21f748a16f4e1688a9014eb3ee6fa325	13412	piracicaba	SP
c5c61596a3b6bd0cee5766992c48a9a1	b6e99561fe6f34a55b0b7da92f8ed775	7124	guarulhos	SP
9b8ce803689b3562defaad4613ef426f	7f3a72e8f988c6e735ba118d54f47458	5416	sao paulo	SP
2938121a40a20953c43caa8c98787fcf	482441ea6a06b1f72fe9784756c0ea75	5713	sao paulo	SP
cb721d7b4f271fd87011c4c83462c076	a5844ba4bf8d0cc61d13027c7e63bcc	8225	sao paulo	SP
f681356046d9fde60e70c73a18d65ea2	5f102dd37243f152aec3607970aad100	9121	santo andre	SP

The results grid has columns: customer_id, customer_unique_id, customer_zip_code_prefix, customer_city, and customer_state. The grid is labeled "Result Grid" in the toolbar.

2. GROUP BY, ORDER BY COMMAND

The screenshot shows the SQL Server Management Studio interface. In the top pane, a query is written:

```
6 -- Show top 5 cities with most customers
7 • SELECT customer_city, COUNT(*) AS total_customers
8 FROM olist_customers
9 GROUP BY customer_city
10 ORDER BY total_customers DESC
11 LIMIT 5;
12
13
14
```

In the bottom pane, the results of the query are displayed in a grid:

customer_city	total_customers
sao paulo	8119
rio de janeiro	3667
belo horizonte	1448
brasilia	1114
curitiba	780

The results grid has columns: customer_city and total_customers. The grid is labeled "Result Grid" in the toolbar.

3. USE JOINS (INNER,LEFT,RIGHT)

SQL File 3* x

26
27 -- INNER JOIN - Customers with their orders
28 • SELECT c.customer_id, c.customer_state, s.region_name
29 FROM olist_customers c
30 INNER JOIN customer_states s
31 ON c.customer_state = s.state_code
32 LIMIT 10;

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows: Result Grid

customer_id	customer_state	region_name
06b8999e2fba1a1fbc88172c00ba8bc7	SP	Southeast
18955e83d337fd6b2def6b18a428ac77	SP	Southeast
4e7b3e00288586ebd08712fdd0374a03	SP	Southeast
b2b6027bc5c5109e529d4dc6358b12c3	SP	Southeast
4f2d8ab171c80ec8364f7c12e35b23ad	SP	Southeast
fd826e7cf63160e536e0908c76c3f441	SP	Southeast
5e274e7a0c3809e14aba7ad5aae0d407	MG	Southeast
5adf08e34b2e993982a47070956c5c65	PR	South
4b7139f34592b3a31687243a302fa75b	MG	Southeast
9fb35e4ed6f0a14a4977cd9aea4042bb	MG	Southeast

Result 4 x Read Only

Output

SQL File 3* x

33
34 -- LEFT JOIN: all customers, even if no region mapping
35 • SELECT c.customer_id, c.customer_state, s.region_name
36 FROM olist_customers c
37 LEFT JOIN customer_states s
38 ON c.customer_state = s.state_code
39 LIMIT 10;

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows: Result Grid

customer_id	customer_state	region_name
06b8999e2fba1a1fbc88172c00ba8bc7	SP	Southeast
06b8999e2fba1a1fbc88172c00ba8bc7	SP	Southeast
06b8999e2fba1a1fbc88172c00ba8bc7	SP	Southeast
18955e83d337fd6b2def6b18a428ac77	SP	Southeast
18955e83d337fd6b2def6b18a428ac77	SP	Southeast
18955e83d337fd6b2def6b18a428ac77	SP	Southeast
4e7b3e00288586ebd08712fdd0374a03	SP	Southeast
4e7b3e00288586ebd08712fdd0374a03	SP	Southeast
4e7b3e00288586ebd08712fdd0374a03	SP	Southeast
b2b6027bc5c5109e529d4dc6358b12c3	SP	Southeast

Result 7 x Read Only

4. SUBQUERIES

SQL File 3* x

```

48 -- to find customers from the most common state
49 • SELECT * FROM olist_customers
50 WHERE customer_state = (
51     SELECT customer_state
52         FROM olist_customers
53     GROUP BY customer_state
54     ORDER BY COUNT(*) DESC
55     LIMIT 1
--
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows: Result Grid Form Editor Field Types

customer_id	customer_unique_id	customer_zip_code_prefix	customer_city	custom
06b8999e2fba1a1fb88172c00ba8bc7	861eff4711a542e4b93843c6dd7febb0	14409	franca	SP
18955e83d337fd6b2def6b18a428ac77	290c77bc529b7ac935b93aa66c333dc3	9790	sao bernardo do campo	SP
4e7b3e00286586ebd08712ffd0374a03	060e732b5b29e8181a18229c7b0b2b5e	1151	sao paulo	SP
b2b6027bc5c5109e529d4dc6358b12c3	259dac757896d24d7702b9acbbff3f3c	8775	mogi das cruzes	SP
4f2d8ab171c80ec8364f7c12e35b23ad	345ecd01c38d18a9036ed96c73b8d066	13056	campinas	SP
fd826e7cf63160e536e0908c76c3ff441	addec96d2e059c80c30fe6871d30d177	4534	sao paulo	SP
b2d1536598b73a9abd18e0d75d92f0a3	918dc87cd72cd9f6ed4bd442ed785235	18682	lencois paulista	SP
eabebad39a88bb6f5b52376faec28612	295c05e81917928d76245e842748184d	5704	sao paulo	SP
206f3129c0e4d7d0b9550426023f0a08	21f748a16f4e1688a9014eb3ee6fa325	13412	piracicaba	SP

olist_customers9 x Read Only

SQL File 3* x

```

58 -- To find cities with more than 100 customers
59 • SELECT customer_city, COUNT(*) AS customer_count
60     FROM olist_customers
61     GROUP BY customer_city
62     HAVING COUNT(*) > 100
63     ORDER BY customer_count DESC;
64
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Field Types

customer_city	customer_count
sao paulo	15540
rio de janeiro	6882
belo horizonte	2773
brasilia	2131
curitiba	1521
campinas	1444
porto alegre	1379
salvador	1245
guarulhos	1189
sao bernardo do campo	938
niteroi	849
santo andre	797
osasco	746
santos	713
goliania	692
sao jose dos campos	691

Result 10 x Read Only

SQL File 3* x

65 -- To show how many customers are from each state (using a correlated subquery)
66 • SELECT customer_state, COUNT(*) AS total_customers_in_state
67 FROM olist_customers
68 GROUP BY customer_state
69 ORDER BY total_customers_in_state DESC;
70
71

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Field Types Read Only

customer_state	total_customers_in_state
SP	41746
RJ	12852
MG	11635
RS	5466
PR	5045
SC	3637
BA	3380
DF	2140
ES	2033
GO	2020
PE	1652
CE	1336

Result 12 x

Action Output

#	Time	Action	Message
1	16:04:28	SELECT customer_state,COUNT(*) AS total_customers_in_state FROM olist_customers...	27 row(s) returned

5. AGGREGATE FUNCTIONS (SUM,AVG,COUNT,MAX,MIN)

SQL File 3* x

71 -- Total number of customers per state (using COUNT())
72 • SELECT customer_state, COUNT(*) AS total_customers
73 FROM olist_customers
74 GROUP BY customer_state
75 ORDER BY total_customers DESC;
76
77

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Field Types Read Only

customer_state	total_customers
SP	41746
RJ	12852
MG	11635
RS	5466
PR	5045
SC	3637
BA	3380
DF	2140
ES	2033
GO	2020
PE	1652
CE	1336

Result 13 x

SQL File 3*

```

77 -- Most common city per state (with MAX() and GROUP BY combo)
78 • SELECT customer_state, COUNT(*) AS total_customers
79   FROM olist_customers
80   GROUP BY customer_state, customer_city
81   ORDER BY total_customers DESC
82   LIMIT 10;
83

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: | Result Grid | Form Editor | Field Types | Read Only

customer_state	total_customers
SP	15540
RJ	6882
MG	2773
DF	2131
PR	1521
SP	1444
RS	1379
BA	1245
SP	1189
SP	938

Result 14 × | Output: | Read Only

6. VIEWS

SQL File 3*

```

84 -- Creating Views
85
86 • CREATE VIEW customers_by_state AS
87   SELECT customer_state, COUNT(*) AS total_customers
88   FROM olist_customers
89   GROUP BY customer_state;
90
91 • SELECT * FROM customers_by_state;
92

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Result Grid | Form Editor | Field Types | Read Only

customer_state	total_customers
SP	41746
SC	3637
MG	11635
PR	5045
RJ	12852
RS	5466
PA	975
GO	2000

customers_by_state 15 × | Output: | Action Output | # | Time | Action | Message

#	Time	Action	Message
1	16:09:51	CREATE VIEW customers_by_state AS SELECT customer_state, COUNT(*) AS total...	0 row(s) affected
2	16:10:17	SELECT * FROM customers_by_state LIMIT 0, 1000	27 row(s) returned