

DB Browser for SQLite - D:\Gopal\eleveate labs internship\task 3\olist\_task3.db

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

14 ORDER BY customer_zip_code_prefix
15 LIMIT 50;
16
17 /* 3. Aggregation with GROUP BY: Customers per state */
18 SELECT customer_state, COUNT(*) AS num_customers
19 FROM customers
20 GROUP BY customer_state
21 ORDER BY num_customers DESC;

```

customer_state	num_customers
SP	41746
RJ	12852
MG	11635
RS	5466
PR	5045
SC	3637
BA	3380

No cell active.  
Type: NULL; Size: 0 bytes

Remote  
Identity Select an identity to connect  
DBHub.io Local Current Database

Name Last modified

Execution finished without errors.  
Result: 27 rows returned in 60ms  
At line 17:  
/\* 3. Aggregation with GROUP BY: Customers per state \*/  
SELECT customer\_state, COUNT(\*) AS num\_customers  
FROM customers  
GROUP BY customer\_state

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

22
23 /* 4. Aggregation with AVG, MIN, MAX on zip code prefix (numeric summary)
24 SELECT
25     COUNT(*) AS total_customers,
26     MIN(customer_zip_code_prefix) AS min_zip_prefix,
27     MAX(customer_zip_code_prefix) AS max_zip_prefix,
28     ROUND(AVG(customer_zip_code_prefix),2) AS avg_zip_prefix
29 FROM customers;

```

total_customers	min_zip_prefix	max_zip_prefix	avg_zip_prefix
99441	1003	99990	35137.47

No cell active.  
Type: NULL; Size: 0 bytes

Remote  
Identity Select an identity to connect  
DBHub.io Local Current Database

Name

Execution finished without errors.  
Result: 1 rows returned in 28ms  
At line 23:  
/\* 4. Aggregation with AVG, MIN, MAX on zip code prefix (numeric summary)  
\*/
SELECT  
 COUNT(\*) AS total\_customers,

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Edit Database Cell

Mode: Text NULL

No cell active. Type: NULL; Size: 0 bytes

Remote Identity Select an identity to connect

DBHub.io Local Current

Name

SOL Log Plot DB Schema

**SQL 1\***

```

29   FROM customers;
30
31  /* 5. Find duplicate customer_unique_id (customers with same unique id) */
32  SELECT customer_unique_id, COUNT(*) AS occurrences
33  FROM customers
34  GROUP BY customer_unique_id
35  HAVING occurrences > 1
36  ORDER BY occurrences DESC;

```

	customer_unique_id	occurrences
1	8d50f5eadf50201cccdcedfb9e2ac8455	17
2	3e43e6105506432c953e165fb2acf44c	9
3	ca77025e7201e3b30c44b472ff346268	7
4	6469f99c1f9dfaef7733b25662e7f1782	7
5	1b6c7548a2a1f9037c1fd3ddfed95f33	7
6	f0e310a6839dce9de1638e0fe5ab282a	6
7	de34b16117594161a6a89c50b289d35a	6

Execution finished without errors.  
Result: 2997 rows returned in 98ms  
At line 31:  
/\* 5. Find duplicate customer\_unique\_id (customers with same unique id) \*/  
SELECT customer\_unique\_id, COUNT(\*) AS occurrences  
FROM customers  
GROUP BY customer\_unique\_id

**SQL 1\***

```

38  /* 6. Subquery example: customers whose zip > overall average zip prefix */
39  SELECT customer_id, customer_unique_id, customer_zip_code_prefix, customer_city, customer_state
40  FROM customers
41  WHERE customer_zip_code_prefix > (
42      SELECT AVG(customer_zip_code_prefix) FROM customers
43  )
44  ORDER BY customer_zip_code_prefix DESC
45  LIMIT 50;

```

	customer_id	customer_unique_id
1	f04c3f6e20a2a4318d97d7cec1d27bbf	8f846b30f8f56368cd1bf4c89effe74
2	964b34423c822e9bd9831635ccc83db2	e49eafdf7e69d43b8d86f6b5590faf0d2
3	657ba09c6edfbcb09f6054f541ec1f90	3dbb390afed2043063d358900ae05d0d
4	3ab8bc00f8740d54afc4c771fb6c7f69	0528a0a940c7116ccb48fdbb8e80a8ff
5	f93bb6c70a7306d18a24f77f1889916d	ee0a41f3ec008b1459efbd99c775e6ea
6	235702411e5214f0e4a0761bf5ce9e99	9fc089b0b6a8db40d4357e784f1e91d4

Execution finished without errors.  
Result: 50 rows returned in 38ms  
At line 38:  
/\* 6. Subquery example: customers whose zip > overall average zip prefix \*/  
SELECT customer\_id, customer\_unique\_id, customer\_zip\_code\_prefix,  
customer\_city, customer\_state  
FROM customers

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

44     ORDER BY customer_zip_code_prefix DESC
45     LIMIT 50;
46
47 /* 7. Create a view for quick analysis: customers_by_state */
48 DROP VIEW IF EXISTS customers_by_state;
49 CREATE VIEW customers_by_state AS
50     SELECT customer_state, COUNT(*) AS num_customers, COUNT(DISTINCT custo
51     FROM customers
52     GROUP BY customer_state;

```

	customer_id	customer_unique_id
1	f04c3f6e20a2a4318d97d7cecd27bbf	8f846b30f8f56368cd1bf4c89efeed74
2	964b34423c822e9bd9831635ccc83db2	e49eaf7e69d43b8d86f6b5590fafd02
3	657ba09c6edfbcc09f6054f541ec1f90	3dbb390afed2043063d358900ae05d0d
4	3ab8bc00f8740d54afc4c771fb6c7f69	0528a0a940c7116ccb48fdbb8e80a8ff
5	f93bb6c70a7306d18a24f77f1889916d	ee0a41f3ec008b1459efbd99c775e6ea
6	235702411e5214f0e4a0761bf5ce9e99	9fc089b0b6a8db40d4357e784f1e91d4

Execution finished without errors.  
Result: query executed successfully. Took 0ms  
At line 49:  
CREATE VIEW customers\_by\_state AS  
SELECT customer\_state, COUNT(\*) AS num\_customers, COUNT(DISTINCT  
customer\_unique\_id) AS unique\_customers  
FROM customers

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

47 /* 7. Create a view for quick analysis: customers_by_state */
48 DROP VIEW IF EXISTS customers_by_state;
49 CREATE VIEW customers_by_state AS
50     SELECT customer_state, COUNT(*) AS num_customers, COUNT(DISTINCT custo
51     FROM customers
52     GROUP BY customer_state;
53
54 /* Query the view */
55     SELECT * FROM customers_by_state ORDER BY num_customers DESC;

```

	customer_state	num_customers	unique_customers
1	SP	41746	40302
2	RJ	12852	12384
3	MG	11635	11259
4	RS	5466	5277
5	PR	5045	4882
6	SC	3637	3534
7	BA	3380	3277

Execution finished without errors.  
Result: 27 rows returned in 185ms  
At line 54:  
/\* Query the view \*/  
SELECT \* FROM customers\_by\_state ORDER BY num\_customers DESC;

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

53  /* Query the view */
54  SELECT * FROM customers_by_state ORDER BY num_customers DESC;
55
56
57  /* 8. Create an index to speed up queries filtering by state and zip */
58  CREATE INDEX IF NOT EXISTS idx_customers_state ON customers(customer_
59  CREATE INDEX IF NOT EXISTS idx_customers_zip ON customers(customer_zi
60
61

```

	customer_state	num_customers	unique_customers
1	SP	41746	40302
2	RJ	12852	12384
3	MG	11635	11259
4	RS	5466	5277
5	PR	5045	4882
6	SC	3637	3534
7	BA	3380	3277

Execution finished without errors.  
Result: query executed successfully. Took 77ms  
At line 59:  
CREATE INDEX IF NOT EXISTS idx\_customers\_zip ON customers(customer\_zip\_code\_prefix);

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

59  CREATE INDEX IF NOT EXISTS idx_customers_zip ON customers(customer_zip
60
61  /* 9. Example query that uses the index (filter then group): top cities
62  SELECT customer_city, COUNT(*) AS city_count
63  FROM customers
64  WHERE customer_state = 'SP' -- change to state code present in your
65  GROUP BY customer_city
66  ORDER BY city_count DESC
67  LIMIT 20;

```

	customer_city	city_count
1	sao paulo	15540
2	campinas	1444
3	guarulhos	1189
4	sao bernardo do campo	938
5	santo andre	796
6	osasco	746
7	santos	713

Execution finished without errors.  
Result: 20 rows returned in 49ms  
At line 61:  
/\* 9. Example query that uses the index (filter then group): top cities in a particular state \*/  
SELECT customer\_city, COUNT(\*) AS city\_count  
FROM customers

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

69  /* 10. Save query outputs into a temporary table (useful for later jo:
70  DROP TABLE IF EXISTS top_states;
71  CREATE TABLE top_states AS
72  SELECT customer_state, COUNT(*) AS num_customers
73  FROM customers
74  GROUP BY customer_state
75  ORDER BY num_customers DESC
76  LIMIT 10;
77

```

	customer_city	city_count
1	sao paulo	15540
2	campinas	1444
3	guarulhos	1189
4	sao bernardo do campo	938
5	santo andre	796
6	osasco	746
7	santos	713

Execution finished without errors.  
Result: query executed successfully. Took 12ms  
At line 71:  
CREATE TABLE top\_states AS  
SELECT customer\_state, COUNT(\*) AS num\_customers  
FROM customers  
GROUP BY customer\_state

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Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1\*

```

71  CREATE TABLE top_states AS
72  SELECT customer_state, COUNT(*) AS num_customers
73  FROM customers
74  GROUP BY customer_state
75  ORDER BY num_customers DESC
76  LIMIT 10;
77
78  /* 11. Show the temp table */
79  SELECT * FROM top_states;

```

	customer_state	num_customers
1	SP	41746
2	RJ	12852
3	MG	11635
4	RS	5466
5	PR	5045
6	SC	3637
7	BA	3380

Execution finished without errors.  
Result: 10 rows returned in 5ms  
At line 78:  
/\* 11. Show the temp table \*/  
SELECT \* FROM top\_states;

Edit Database Cell

No cell active.  
Type: NULL; Size: 0 bytes

Remote

Identity Select an identity to connect

DBHub.io Local Current Database

Name

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