

Elevate Labs

Task 4 – SQL for Data Analysis

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Source Code:

```
CREATE DATABASE ecommerce;

USE ecommerce;

CREATE TABLE customers (
    customer_id VARCHAR(50) PRIMARY KEY,
    customer_unique_id VARCHAR(50),
    customer_zip_code_prefix INT,
    customer_city VARCHAR(50),
    customer_state VARCHAR(2)
);

INSERT INTO customers VALUES
('06b8999e2fba1a1fbc88172c00ba8bc7','861eff4711a542e4b93843c6dd7febb0',14409,'franca',
'SP'),
('18955e83d337fd6b2def6b18a428ac77','290c77bc529b7ac935b93aa66c333dc3',9790,'sao
bernardo do campo','SP'),
('4e7b3e00288586ebd08712fdd0374a03','060e732b5b29e8181a18229c7b0b2b5e',1151,'sao
paulo','SP'),
('b2b6027bc5c5109e529d4dc6358b12c3','259dac757896d24d7702b9acbbff3f3c',8775,'mogi
das cruzeis','SP'),
('4f2d8ab171c80ec8364f7c12e35b23ad','345ecd01c38d18a9036ed96c73b8d066',13056,'camp
inas','SP'),
('879864dab9bc3047522c92c82e1212b8','4c93744516667ad3b8f1fb645a3116a4',89254,'jarag
ua do sul','SC'),
('fd826e7cf63160e536e0908c76c3f441','addec96d2e059c80c30fe6871d30d177',4534,'sao
paulo','SP'),
('5e274e7a0c3809e14aba7ad5aae0d407','57b2a98a409812fe9618067b6b8ebe4f',35182,'timot
eo','MG'),
('5adf08e34b2e993982a47070956c5c65','1175e95fb47ddff9de6b2b06188f7e0d',81560,'curiti
ba','PR'),
```

```
('4b7139f34592b3a31687243a302fa75b','9afe194fb833f79e300e37e580171f22',30575,'belo horizonte','MG');
```

#a) SELECT, WHERE, ORDER BY

-- List all customers in SP

```
SELECT customer_id, customer_city
```

```
FROM customers
```

```
WHERE customer_state = 'SP'
```

```
ORDER BY customer_city;
```

#b) GROUP BY and AGGREGATES

```
SELECT customer_state, COUNT(*) AS num_customers
```

```
FROM customers
```

```
GROUP BY customer_state;
```

#c) Subqueries

```
SELECT customer_city
```

```
FROM customers
```

```
WHERE customer_state = (
```

```
    SELECT customer_state
```

```
    FROM customers
```

```
    GROUP BY customer_state
```

```
    ORDER BY COUNT(*) DESC
```

```
    LIMIT 1
```

```
);
```

#d) Views

```
CREATE VIEW customers_by_state AS
```

```
SELECT customer_state, COUNT(*) AS total_customers
```

```
FROM customers
```

```
GROUP BY customer_state;
```

-- Query the view

```
SELECT * FROM customers_by_state;
```

#e) Indexes

-- By city

```
CREATE INDEX idx_city ON customers(customer_city);
```