

# 1. Import the dataset and do usual exploratory analysis steps like checking the structure & characteristics of the dataset:

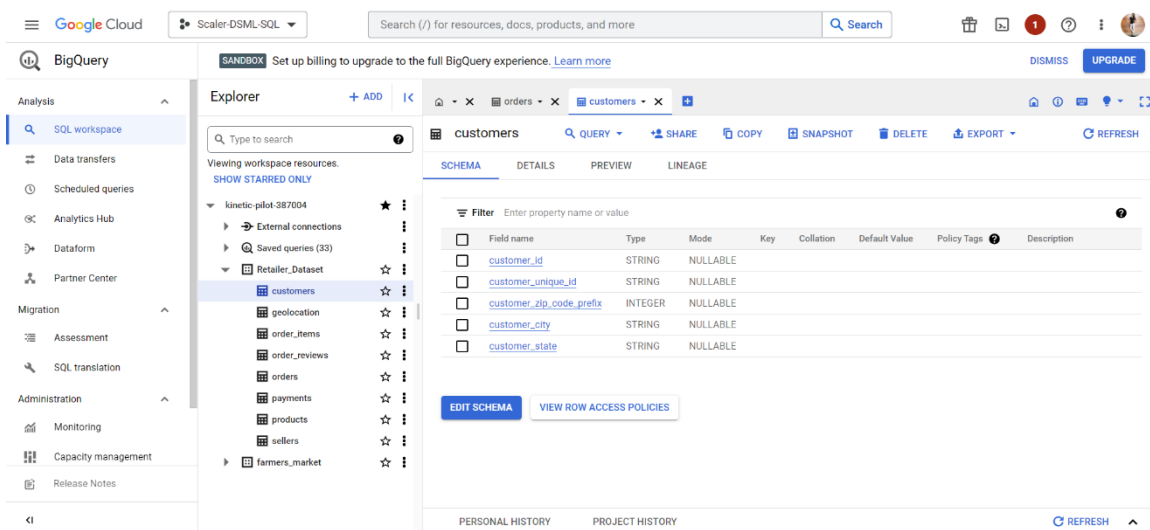
1) Data type of all columns in the "customers" table.

**Answer:**

1. Click on SQL workspace -> Explorer -> table\_name -> schema
2. `SELECT * FROM myDataset.INFORMATION_SCHEMA.TABLES;`

| Field_name   DataType                |
|--------------------------------------|
| 1.customer_id   String               |
| 2.customer_unique_id   String        |
| 3.customer_zip_code_prefix   Integer |
| 4.customer_city   String             |
| 5.customer_state   String            |

**Snapshot:**



2) Get the time range between which the orders were placed.

**Answer:**

```
SELECT
  MIN( order_purchase_timestamp) AS min_date,
  MAX(order_purchase_timestamp) AS max_date
FROM
  `Retailer_Dataset.orders`;
```

## Snapshot:

The screenshot shows a data analytics interface with a sidebar on the left containing a search bar and a list of workspace resources. The main area displays a query editor with a SQL query and a results table below it.

**Query Editor:**

```
1 SELECT
2 MIN(order_purchase_timestamp) AS min_date,
3 MAX(order_purchase_timestamp) AS max_date
4 FROM
5 `Retailer_Dataset.orders`;
```

**Query results:**

| JOB INFORMATION | RESULTS                 | JSON                    | EXECUTION DETAILS | EXECUTION GRAPH |
|-----------------|-------------------------|-------------------------|-------------------|-----------------|
| Row             | min_date                | max_date                |                   |                 |
| 1               | 2016-09-04 21:15:19 UTC | 2018-10-17 17:30:18 UTC |                   |                 |

## Insights / Recommendation:

1. Here date range is 2016-09-04 to 2018-10-17 that means we have not fully two years data from 2016-Jan to 2018-Dec.

3) Count the number of Cities and States in our dataset.

## Answer:

```
SELECT
COUNT(DISTINCT geolocation_city)AS CITY,
COUNT(DISTINCT geolocation_state) AS STATE
FROM
`kinetic-pilot-387004.Retailer_Dataset.geolocation`
```

## Snapshot:

The screenshot shows a data analytics interface with a sidebar on the left containing a search bar and a list of workspace resources. The main area displays a query editor with a SQL query and a results table below it.

**Query Editor:**

```
1 SELECT
2 COUNT(DISTINCT geolocation_city)AS CITY,
3 COUNT(DISTINCT geolocation_state) AS STATE
4 FROM
5 `kinetic-pilot-387004.Retailer_Dataset.geolocation`
```

**Query results:**

| JOB INFORMATION | RESULTS | JSON  | EXECUTION DETAILS | EXECUTION GRAPH |
|-----------------|---------|-------|-------------------|-----------------|
| Row             | CITY    | STATE |                   |                 |
| 1               | 8011    | 27    |                   |                 |

## Insight/Recommendation:

With this data we can find that how many different state and different city is there where we can have customers and sellers we can connect them with each other.

I have recommendation here we can also get insight of each state means each state how many city are there which have service with this we can find which state have strong network of retail and which state we still have to work on.

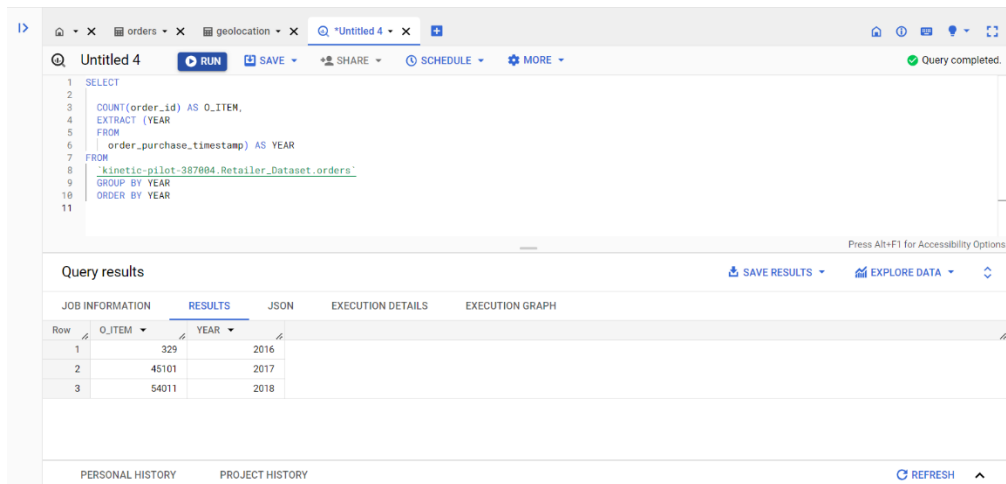
## 2. In-depth Exploration:

1) Is there a growing trend in the no. of orders placed over the past years?

**Answer:**

```
SELECT
  COUNT(order_id) AS O_ITEM,
  EXTRACT (YEAR
FROM
  order_purchase_timestamp) AS YEAR
FROM
  `kinetic-pilot-387004.Retailer_Dataset.orders`
GROUP BY YEAR
ORDER BY YEAR
```

**Snapshot:**



The screenshot shows a SQL query editor with a query window and a results window. The query is the same as the one above. The results window shows the following data:

| Row | O_ITEM | YEAR |
|-----|--------|------|
| 1   | 329    | 2016 |
| 2   | 45101  | 2017 |
| 3   | 54011  | 2018 |

**Insight/Recommendation:**

With the data we can observe that item order increase with year passing.

2) Can we see some kind of monthly seasonality in terms of the no. of orders being placed?

**Answer:**

```
SELECT
  COUNT(order_id) AS O_ITEM,
  EXTRACT (month
FROM
  order_purchase_timestamp) AS month
FROM
  `kinetic-pilot-387004.Retailer_Dataset.orders`
GROUP BY month
ORDER BY O_ITEM DESC
```

## Snapshot:

The screenshot shows a SQL query editor with a query to count orders by month. The query is as follows:

```
1 SELECT
2   COUNT(order_id) AS O_ITEM,
3   EXTRACT (month
4     FROM
5       order_purchase_timestamp) AS month
6 FROM
7   `kinetic-pilot-387004.Retailer_Dataset.orders`
8 GROUP BY month
9 ORDER BY O_ITEM DESC
```

The query results are displayed in a table with 10 rows and 3 columns: Row, O\_ITEM, and month. The results are as follows:

| Row | O_ITEM | month |
|-----|--------|-------|
| 1   | 10843  | 8     |
| 2   | 10573  | 5     |
| 3   | 10318  | 7     |
| 4   | 9893   | 3     |
| 5   | 9412   | 6     |
| 6   | 9343   | 4     |
| 7   | 8508   | 2     |
| 8   | 8069   | 1     |
| 9   | 7544   | 11    |
| 10  | 5674   | 12    |

## Insight/Recommendation:

Yes, We can see according to data that people are more buying in August, May, July and less buy in November and December. It give us peoples mind set and timing when they mostly buy.

3) During what time of the day, do the Brazilian customers mostly place their orders?  
(Dawn, Morning, Afternoon or Night)

- 0-6 hrs : Dawn
- 7-12 hrs : Mornings
- 13-18 hrs : Afternoon
- 19-23 hrs : Night

## Answer:

```
SELECT
  CASE
    WHEN HOUR >= 0 AND HOUR <= 6 THEN 'Dawn'
    WHEN HOUR >= 7 AND HOUR <=12 THEN 'Morning'
    WHEN HOUR >= 13 AND HOUR <=18 THEN 'Afternoon'
    WHEN HOUR >= 19 AND HOUR <= 23 THEN 'Night'
  END AS time_of_day,count(order_id) as total_order
FROM (
  SELECT
    order_id,
    EXTRACT (HOUR
      FROM
        order_purchase_timestamp) HOUR
  FROM
    `kinetic-pilot-387004.Retailer_Dataset.orders`
) h
GROUP BY 1
order by total_order desc
```

## Snapshot:

The screenshot shows a SQL query editor with a query that categorizes orders by time of day. The query uses a CASE statement to assign 'Dawn', 'Morning', 'Afternoon', or 'Night' to each order based on its purchase timestamp. It then counts the number of orders for each category. The results table shows the following data:

| time_of_day | total_order |
|-------------|-------------|
| Afternoon   | 38135       |
| Night       | 28331       |
| Morning     | 27733       |
| Dawn        | 5242        |

## Insight/Recommendation:

With the data we can find that people are more buying in Afternoon and less buy in dawn.

In general we used to thought people are buy in night but with data we can find that people have buying tendency in day is Afternoon

## 3. Evolution of E-commerce orders in the Brazil region:

1) Get the month on month no. of orders placed in each state.

## Answer:

```
select
distinct c.customer_state as state,
count(order_id) as order_count,
extract(month from order_purchase_timestamp) as mn,
from `kinetic-pilot-387004.Retailer_Dataset.orders` o
join `Retailer_Dataset.customers` c
on o.customer_id = c.customer_id
group by mn,state
order by state,mn
```

## Snapshot:

The screenshot shows a SQL query editor with a query that joins the orders and customers tables, extracts the month from the purchase timestamp, and counts the number of orders for each state and month. The results table shows the following data:

| state | order_count | mn |
|-------|-------------|----|
| AC    | 8           | 1  |
| AC    | 6           | 2  |
| AC    | 4           | 3  |
| AC    | 9           | 4  |
| AC    | 10          | 5  |
| AC    | 7           | 6  |
| AC    | 9           | 7  |
| AC    | 7           | 8  |
| AC    | 5           | 9  |
| AC    | 6           | 10 |

## Insight/Recommendation:

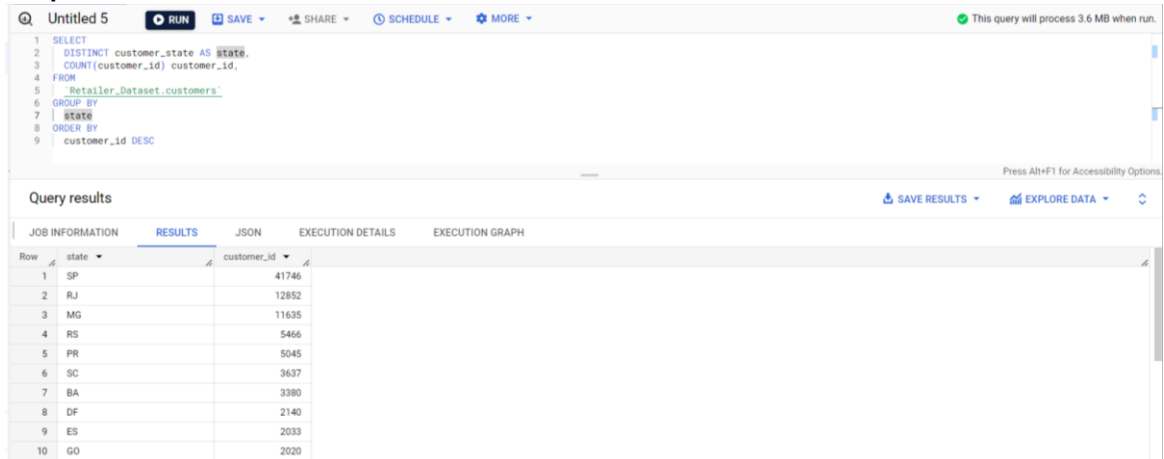
Here we have data for each state for each month how many order placed. With this we can observe different states people's tendency to which month they more. And if we go deeper with data we can find reason for this.

2) How are the customers distributed across all the states?

**Answer:**

```
SELECT
DISTINCT customer_state AS state,
COUNT(customer_id) customer_id,
FROM
`Retailer_Dataset.customers`
GROUP BY
state
ORDER BY
customer_id DESC
```

**Snapshot:**



The screenshot shows a SQL query editor with the following query:

```
1 SELECT
2 DISTINCT customer_state AS state,
3 COUNT(customer_id) customer_id,
4 FROM
5 `Retailer_Dataset.customers`
6 GROUP BY
7 state
8 ORDER BY
9 customer_id DESC
```

Below the query editor, the 'Query results' tab is active, displaying a table with 10 rows and 2 columns: 'state' and 'customer\_id'.

| Row | state | customer_id |
|-----|-------|-------------|
| 1   | SP    | 41746       |
| 2   | RJ    | 12852       |
| 3   | MG    | 11635       |
| 4   | RS    | 5466        |
| 5   | PR    | 5045        |
| 6   | SC    | 3637        |
| 7   | BA    | 3380        |
| 8   | DF    | 2140        |
| 9   | ES    | 2033        |
| 10  | GO    | 2020        |

**Insight/Recommendation:**

With the data you can find that "SP" state have more customers and "GO" state have less customers. With this data we get to know in which state we have more customers and which state have less. In which state we have to do more work to attract customers.

#### 4. Impact on Economy: Analyse the money movement by e-commerce by looking at order prices, freight and others.

- 1) Get the % increase in the cost of orders from year 2017 to 2018 (include months between Jan to Aug only).  
You can use the "payment\_value" column in the payments table to get the cost of orders.

**Answer:**

```
SELECT round((((total_cost_2018 - total_cost_2017) / total_cost_2017) * 100,2) AS percentage_increase
FROM (
    SELECT SUM(payment_value) AS total_cost_2017
    FROM `Retailer_Dataset.orders` o
    JOIN `Retailer_Dataset.payments` p ON o.order_id = p.order_id
    WHERE o.order_purchase_timestamp >= '2017-01-01 00:00:00'
    AND o.order_purchase_timestamp <= '2017-08-31 23:59:59'
) AS t1, (
    SELECT SUM(payment_value) AS total_cost_2018
    FROM `Retailer_Dataset.orders` o
    JOIN `Retailer_Dataset.payments` p ON o.order_id = p.order_id
    WHERE o.order_purchase_timestamp >= '2018-01-01 00:00:00'
    AND o.order_purchase_timestamp <= '2018-08-31 23:59:59'
) AS t2;
```

## Snapshot:

```
1 SELECT round(((total_cost_2018 - total_cost_2017) / total_cost_2017) * 100,2) AS percentage_increase
2 FROM (
3   SELECT SUM(payment_value) AS total_cost_2017
4   FROM `Retailer_Dataset.orders` o
5   JOIN `Retailer_Dataset.payments` p ON o.order_id = p.order_id
6   WHERE o.order_purchase_timestamp >= '2017-01-01 00:00:00'
7   AND o.order_purchase_timestamp <= '2017-08-31 23:59:59'
8 ) AS t1, (
9   SELECT SUM(payment_value) AS total_cost_2018
10  FROM `Retailer_Dataset.orders` o
11  JOIN `Retailer_Dataset.payments` p ON o.order_id = p.order_id
12  WHERE o.order_purchase_timestamp >= '2018-01-01 00:00:00'
13  AND o.order_purchase_timestamp <= '2018-08-31 23:59:59'
14 ) AS t2;
```

Query results

| Row | percentage_increase |
|-----|---------------------|
| 1   | 136.98              |

## Insight/Recommendation:

The data showing increase % of payment value from 2017 to 2018. Which means people's buying capacity also increase and more people are buying from company in 2018 compare to 2017.

2) Calculate the Total & Average value of order price for each state.

## Answer:

```
select
s.seller_state as state,
round(sum(price),2) as order_price_total,
round(avg(price),2) order_price_avg
FROM `kinetic-pilot-387004.Retailer_Dataset.order_items` oi
JOIN `Retailer_Dataset.sellers` s
on oi.seller_id=s.seller_id
group by s.seller_state
order by s.seller_state
```

## Snapshot:

```
1 SELECT
2 s.seller_state as state,
3 round(sum(price),2) as order_price_total,
4 round(avg(price),2) order_price_avg
5 FROM `kinetic-pilot-387004.Retailer_Dataset.order_items` oi
6 JOIN `Retailer_Dataset.sellers` s
7 on oi.seller_id=s.seller_id
8 group by s.seller_state
9 order by s.seller_state
```

Query results

| Row | state | order_price_total | order_price_avg |
|-----|-------|-------------------|-----------------|
| 1   | AC    | 267.0             | 267.0           |
| 2   | AM    | 1177.0            | 392.33          |
| 3   | BA    | 285561.56         | 444.11          |
| 4   | CE    | 20240.64          | 215.33          |
| 5   | DF    | 97749.48          | 108.73          |
| 6   | ES    | 47689.61          | 128.2           |
| 7   | GO    | 66999.21          | 127.69          |
| 8   | MA    | 36408.95          | 89.9            |
| 9   | MG    | 1011564.74        | 114.6           |
| 10  | MS    | 8551.69           | 171.03          |

## Insight/Recommendation:

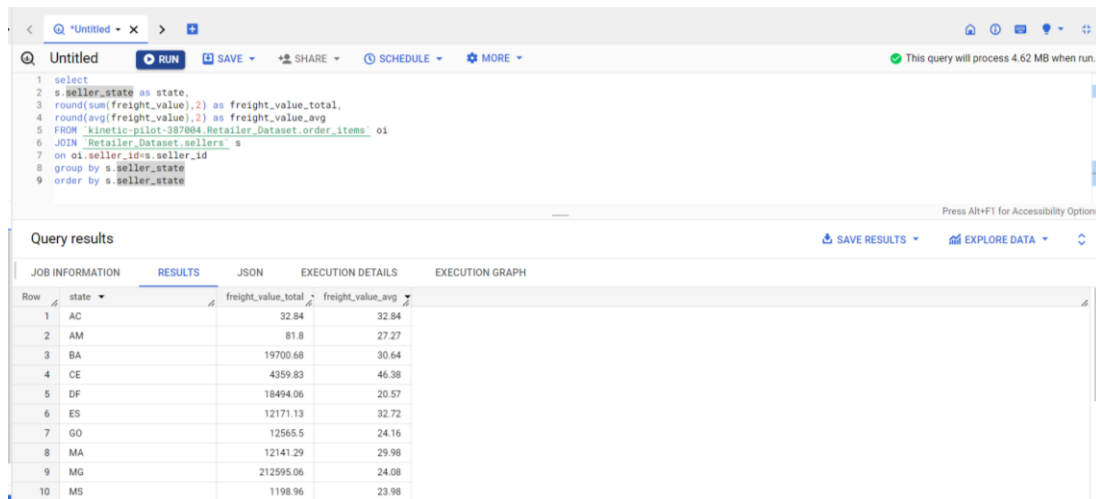
With the data we can get to know for each state about their total order price and average order price. With that we can observe which state are buying more with their average price.

3) Calculate the Total & Average value of order freight for each state.

**Answer:**

```
select
s.seller_state as state,
round(sum(freight_value),2) as freight_value_total,
round(avg(freight_value),2) as freight_value_avg
FROM `kinetic-pilot-387004.Retailer_Dataset.order_items` oi
JOIN `Retailer_Dataset.sellers` s
on oi.seller_id=s.seller_id
group by s.seller_state
order by s.seller_state
```

**Snapshot:**



The screenshot shows a SQL query editor with a query that calculates the total and average freight value for each state. The query is executed, and the results are displayed in a table. The table has columns for state, freight\_value\_total, and freight\_value\_avg. The results are as follows:

| Row | state | freight_value_total | freight_value_avg |
|-----|-------|---------------------|-------------------|
| 1   | AC    | 32.84               | 32.84             |
| 2   | AM    | 81.8                | 27.27             |
| 3   | BA    | 19700.68            | 30.64             |
| 4   | CE    | 4359.83             | 46.38             |
| 5   | DF    | 18494.06            | 20.57             |
| 6   | ES    | 12171.13            | 32.72             |
| 7   | GO    | 12565.5             | 24.16             |
| 8   | MA    | 12141.29            | 29.98             |
| 9   | MG    | 212595.06           | 24.08             |
| 10  | MS    | 1198.96             | 23.98             |

**Insight/Recommendation:**

Every order placed from different state and deliver from different state so their freight value is different from each other so with this data we can find which state have more freight value and it will more add delivery charges.

## 5. Analysis based on sales, freight and delivery time.

1) Find the no. of days taken to deliver each order from the order's purchase date as delivery time.

Also, calculate the difference (in days) between the estimated & actual delivery date of an order.

Do this in a single query.

You can calculate the delivery time and the difference between the estimated & actual delivery date using the given formula:

- **time\_to\_deliver** = order\_delivered\_customer\_date - order\_purchase\_timestamp
- **diff\_estimated\_delivery** = order\_estimated\_delivery\_date - order\_delivered\_customer\_date

**Answer:**

```
select
order_id,
timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day) as time_to_deliver,
timestamp_diff(order_estimated_delivery_date,order_purchase_timestamp,day) as diff_estimated_delivery
from `Retailer_Dataset.orders`
where order_delivered_customer_date is not null
```



## Snapshot:

The screenshot shows a SQL query editor with a query to find orders where the delivery date is not null. The query is executed, and the results are displayed in a table with columns: Row, order\_id, time\_to\_deliver, and diff\_estimated\_delivery.

| Row | order_id                         | time_to_deliver | diff_estimated_delivery |
|-----|----------------------------------|-----------------|-------------------------|
| 1   | 1950d77989f6a877539f53795b4c3c3  | 30              | 17                      |
| 2   | 2c45c33d2f9cb8f8b1c86cc28c11c30  | 30              | 59                      |
| 3   | 65d1e226dfeab8cdc42f6542522d14   | 35              | 52                      |
| 4   | 635c94d068ac37e6e03dc54ecb6189   | 30              | 32                      |
| 5   | 3b97562c3aee8bdcdb5c2e45a50d5e1  | 32              | 33                      |
| 6   | 68f4750f04c4cb6774570cfe3a9aa7   | 29              | 31                      |
| 7   | 276e9ec344d3bf029f83a161c6b3ce9  | 43              | 39                      |
| 8   | 54e1a3c2b97b0809da548a59f64c813  | 40              | 36                      |
| 9   | fd04fa4105ee8045f6a0139ca5b49f27 | 37              | 35                      |
| 10  | 302bb8109d097a9fcd69cfc5917d1f3  | 33              | 28                      |
| 11  | 66057d37308e787052a32828cd007e58 | 38              | 32                      |

## Insight/Recommendation:

In data we can find delivery time and difference between actually delivery and estimated delivery. With this data we can find which order delivered late after estimated date and how many days I was late.

Here, In data there is in customer's delivered date is null in for some orders it indicate that order is shipped from sellers but not reached at customer's It has maybe customer cancel order after created it.

So In this particular query I used "not null condition" to only find delivered orders.

2) Find out the top 5 states with the highest & lowest average freight value.

## Answer:

```
WITH ranked_data AS (  
    SELECT s.seller_state, round(AVG(freight_value),2) AS average_freight_value,  
           DENSE_RANK() OVER (PARTITION BY 'top' ORDER BY AVG(freight_value) DESC) AS rank_high,  
           DENSE_RANK() OVER (PARTITION BY 'low' ORDER BY AVG(freight_value) ASC) AS rank_low  
    FROM `Retailer-Dataset.order_items` oi  
    join `Retailer-Dataset.sellers` s  
    on oi.seller_id=s.seller_id  
    GROUP BY s.seller_state  
)  
SELECT *  
FROM ranked_data  
WHERE rank_high <= 5 OR rank_low <= 5;
```

## Snapshot:

The screenshot shows a SQL query editor with a query to find the top 5 states with the highest and lowest average freight value. The query is executed, and the results are displayed in a table with columns: Row, seller\_state, average\_freight\_valu, rank\_high, and rank\_low.

| Row | seller_state | average_freight_valu | rank_high | rank_low |
|-----|--------------|----------------------|-----------|----------|
| 1   | SP           | 18.45                | 23        | 1        |
| 2   | PA           | 19.39                | 22        | 2        |
| 3   | RJ           | 19.47                | 21        | 3        |
| 4   | DF           | 20.57                | 20        | 4        |
| 5   | PR           | 22.72                | 19        | 5        |
| 6   | AC           | 32.84                | 5         | 19       |
| 7   | PI           | 36.94                | 4         | 20       |
| 8   | PB           | 39.19                | 3         | 21       |
| 9   | CE           | 46.38                | 2         | 22       |
| 10  | RO           | 50.91                | 1         | 23       |

### Insight/Recommendation:

Here, in data we found top 5 highest and 5 lowest average freight value of states. With this we can find that which state have more freight value and which is not.

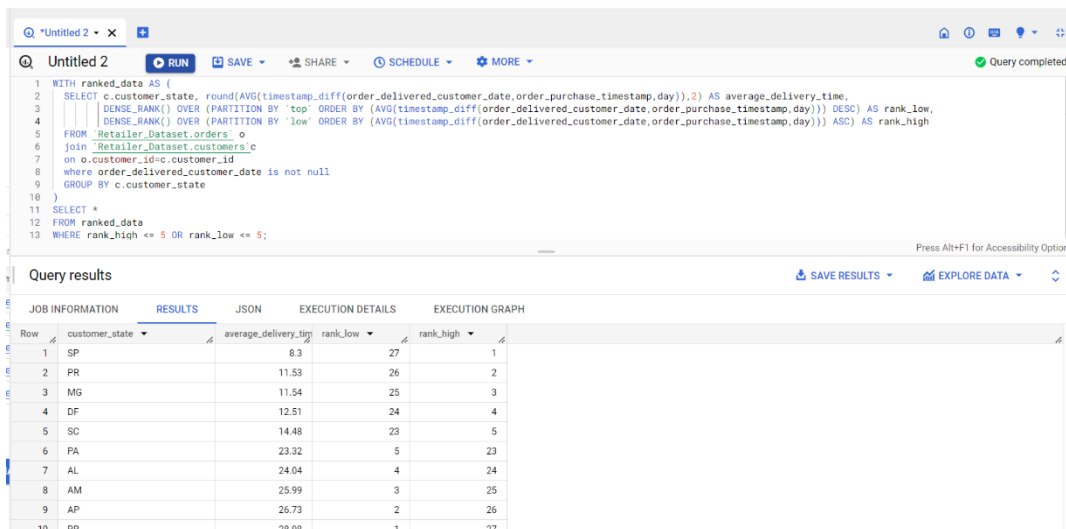
Here I tried to write in only one query we can separately find the data also.

3) Find out the top 5 states with the highest & lowest average delivery time.

**Answer:**

```
WITH ranked_data AS (  
    SELECT c.customer_state,  
    round(AVG(timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day)),2) AS  
    average_delivery_time,  
    DENSE_RANK() OVER (PARTITION BY 'top' ORDER BY  
(AVG(timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day))) DESC) AS rank_low,  
    DENSE_RANK() OVER (PARTITION BY 'low' ORDER BY  
(AVG(timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day))) ASC) AS rank_high  
    FROM `Retailer_Dataset.orders` o  
    join `Retailer_Dataset.customers` c  
    on o.customer_id=c.customer_id  
    where order_delivered_customer_date is not null  
    GROUP BY c.customer_state  
)  
SELECT *  
FROM ranked_data  
WHERE rank_high <= 5 OR rank_low <= 5;
```

### Snapshot:



The screenshot shows a SQL query editor with a query titled 'Untitled 2'. The query is the same as the one provided in the previous block. Below the query editor, the 'Query results' section is displayed, showing a table with 10 rows and 5 columns: 'customer\_state', 'average\_delivery\_time', 'rank\_low', and 'rank\_high'. The table is sorted by 'rank\_low' in ascending order.

| Row | customer_state | average_delivery_time | rank_low | rank_high |
|-----|----------------|-----------------------|----------|-----------|
| 1   | SP             | 8.3                   | 27       | 1         |
| 2   | PR             | 11.53                 | 26       | 2         |
| 3   | MG             | 11.54                 | 25       | 3         |
| 4   | DF             | 12.51                 | 24       | 4         |
| 5   | SC             | 14.48                 | 23       | 5         |
| 6   | PA             | 23.32                 | 5        | 23        |
| 7   | AL             | 24.04                 | 4        | 24        |
| 8   | AM             | 25.99                 | 3        | 25        |
| 9   | AP             | 26.73                 | 2        | 26        |
| 10  | RR             | 28.98                 | 1        | 27        |

### Insight/Recommendation:

In this data we can find which state take less delivery the order and which state take more time to deliver order and with rank we can filter them into top 5 livery time and bottom 5 with highest delivery time.

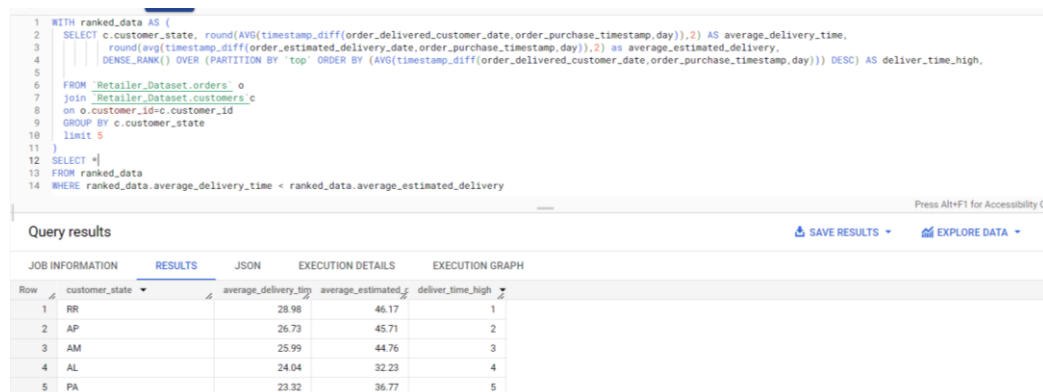
4) Find out the top 5 states where the order delivery is really fast as compared to the estimated date of delivery.

You can use the difference between the averages of actual & estimated delivery date to figure out how fast the delivery was for each state.

### Answer:

```
WITH ranked_data AS (  
    SELECT c.customer_state,  
    round(AVG(timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day)),2) AS  
    average_delivery_time,  
        round(avg(timestamp_diff(order_estimated_delivery_date,order_purchase_timestamp,day)),2) as  
    average_estimated_delivery,  
        DENSE_RANK() OVER (PARTITION BY 'top' ORDER BY  
(AVG(timestamp_diff(order_delivered_customer_date,order_purchase_timestamp,day))) DESC) AS  
    deliver_time_high,  
  
    FROM `Retailer_Dataset.orders` o  
    join `Retailer_Dataset.customers` c  
    on o.customer_id=c.customer_id  
    GROUP BY c.customer_state  
    limit 5  
)  
SELECT *  
FROM ranked_data  
WHERE ranked_data.average_delivery_time < ranked_data.average_estimated_delivery
```

### Snapshot:



The screenshot shows a SQL query editor with a query that filters for the top 5 states by fastest delivery time. Below the query, the 'Query results' section displays a table with 5 rows of data.

| Row | customer_state | average_delivery_time | average_estimated_delivery | deliver_time_high |
|-----|----------------|-----------------------|----------------------------|-------------------|
| 1   | RR             | 28.98                 | 46.17                      | 1                 |
| 2   | AP             | 26.73                 | 45.71                      | 2                 |
| 3   | AM             | 25.99                 | 44.76                      | 3                 |
| 4   | AL             | 24.04                 | 32.23                      | 4                 |
| 5   | PA             | 23.32                 | 36.77                      | 5                 |

### Insight/Recommendation:

Here with this data we can find which state have fastest delivery service compare to estimated delivery time. Using dense\_rank() function we can give them rank according their fastest delivery time get first rank.

We display only top 5 state which have fastest delivery time.

## 6. Analysis based on the payments:

- 1) Find the month on month no. of orders placed using different payment types.

### Answer:

```
select  
extract(month from order_purchase_timestamp) as month,  
count(p.order_id) as order_count,  
p.payment_type,  
from `kinetic-pilot-387004.Retailer_Dataset.orders` o  
join `Retailer_Dataset.payments` p  
on o.order_id = p.order_id  
group by month,p.payment_type  
order by month,order_count desc
```

## Snapshot:

The screenshot shows a SQL query editor with a query titled 'Untitled 2'. The query is as follows:

```
1 select
2   extract(month from order_purchase_timestamp) as month,
3   count(p.order_id) as order_count,
4   p.payment_type,
5   from `kinetic-pilot-387004.Retailer_Dataset.orders` o
6   join `Retailer_Dataset.payments` p
7   on o.order_id = p.order_id
8   group by month, p.payment_type
9   order by month, order_count desc
10
```

The query results are displayed in a table with the following columns: Row, month, order\_count, and payment\_type. The results are as follows:

| Row | month | order_count | payment_type |
|-----|-------|-------------|--------------|
| 1   | 1     | 6103        | credit_card  |
| 2   | 1     | 1715        | UPI          |
| 3   | 1     | 477         | voucher      |
| 4   | 1     | 118         | debit_card   |
| 5   | 2     | 6609        | credit_card  |
| 6   | 2     | 1723        | UPI          |
| 7   | 2     | 424         | voucher      |
| 8   | 2     | 82          | debit_card   |
| 9   | 3     | 7707        | credit_card  |
| 10  | 3     | 1942        | UPI          |

## Insight/Recommendation:

Using this query we can find in every month how many order occur using different payment of method. Here we can observe with month one and month two payment\_type column that people most prefer credit\_card as payment\_type. Then UPI as their payment\_method.

2) Find the no. of orders placed on the basis of the payment instalments that have been paid.

## Answer:

```
select
count(p.order_id) as order_count,
from `kinetic-pilot-387004.Retailer_Dataset.orders` o
join `Retailer_Dataset.payments` p
on o.order_id = p.order_id
where payment_installments = 0
```

## Snapshot:

The screenshot shows a SQL query editor with a query titled 'Untitled 5'. The query is as follows:

```
1 select
2   count(p.order_id) as order_count,
3   from `kinetic-pilot-387004.Retailer_Dataset.orders` o
4   join `Retailer_Dataset.payments` p
5   on o.order_id = p.order_id
6   where payment_installments = 0
7
```

The query results are displayed in a table with the following columns: Row, order\_count. The results are as follows:

| Row | order_count |
|-----|-------------|
| 1   | 2           |

## Insight/Recommendation:

With this data you can find there is only 2 orders which has fully paid other orders are on EMI options who still have remain their instalments to pay. Here I have one recommendation add one more column of remaining instalments of orders with this we can find which have less instalments remain.

