BUSINESS CASE: TARGET SQL

Introduction

Target is one of the world's most recognized brands and one of America's leading retailers. Target makes itself a preferred shopping destination by offering outstanding value, inspiration, innovation, and an exceptional guest experience that no other retailer can deliver.

The analysis of this business case will help us to work on multiple dimensions of the company as it has information on 100k orders from 2016 to 2018 made at Target in Brazil. Various dimensions of order mean: from order status, price, payment, and freight performance to customer location, product attributes, and finally reviews written by customers.

We will perform our analysis based on the question which will mostly cover all the dimensions of the company's performance.

Questions

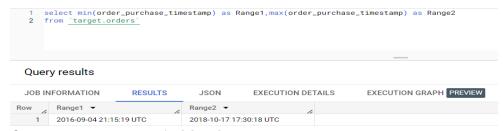
1)Import the dataset and do usual exploratory analysis steps like checking the structure & characteristics of the dataset.

a. Data type of columns in a table.



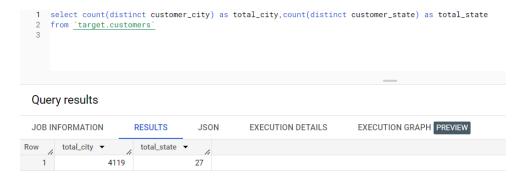
b. Get the time range between which orders were placed.

Soln:



c. Count the number of cities in our data set.

Soln:



2) In depth Exploration:

a. Is there a growing trend in the no. of orders placed over the last few years?

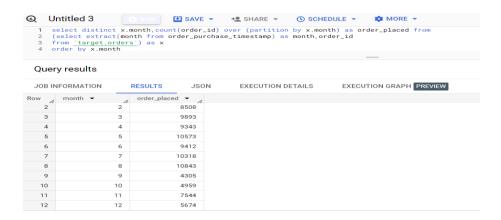
Soln:



Observation: Over the years we can see a clear jump in the number of order placed which shows clear influence of the store on the people.

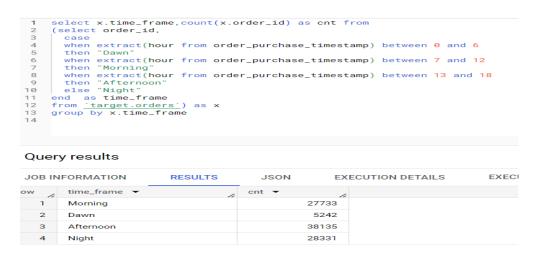
b. Can we see some kind of monthly seasonality in terms of the no of orders being placed?

Soln:



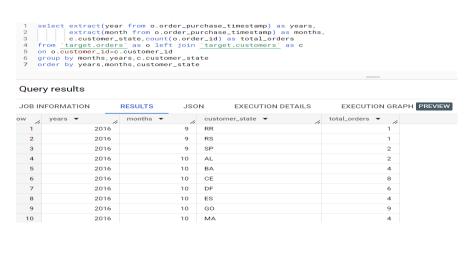
Observation:

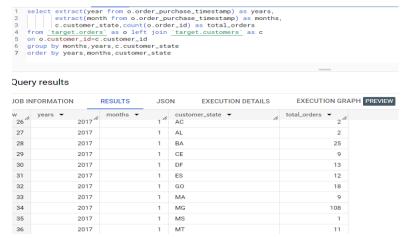
- Orders placed increases decreases by considerable number up-to 8th month.
 It reaches peak in that month and then we see an abrupt decrease in the no of orders placed.
- There is a bit of recovery in next month but it still remains low.
- So the store performs well during first 8th month of the year and then see a drop in orders
- c. During what time of the day, do the Brazilian customers mostly place their orders?

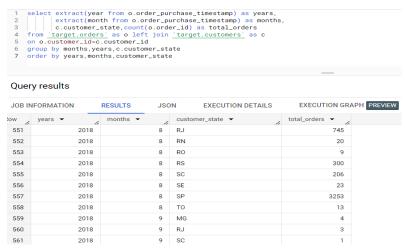


Observation:

- We see the most orders being placed during Afternoon time followed by Night and Morning.
- 3) Evolution of E-commerce orders in the Brazil region.
 - a. Get the month on month no. of orders placed in each state.





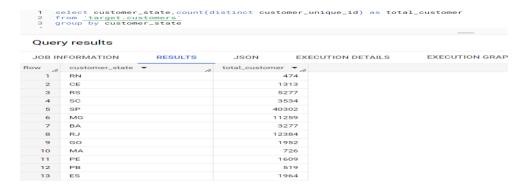


Observation:

 We can clearly see total orders being placed is increasing with each passing year except some month.

b. How are customers distributed across all the states?

Soln:



Observation:

 Majority of the customers are concentrated in few states, which show impact of store on the natives, but few states have few number of customers which is not a good sign.

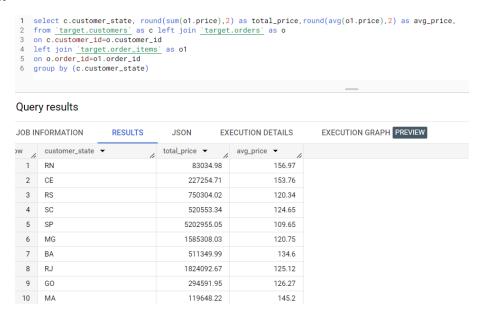
- 4) Analyze the money movement by e-commerce by looking at order price, freight and others.
 - a. Get the % increase in the cost of orders from years 2017 to 2018(include months between Jan to Aug only)

soln:



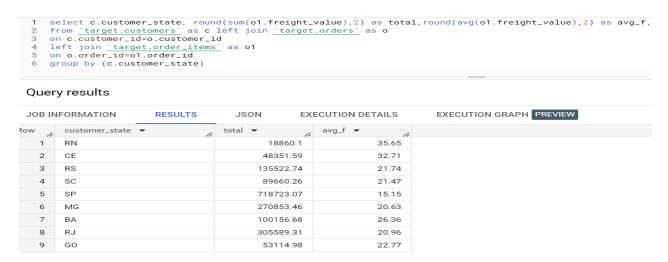
Observation:

- There is whooping increase in the cost of order between 2017 and 2018 considering Jan to August month.
- b. Calculate the Total and Average value of order price for each state.



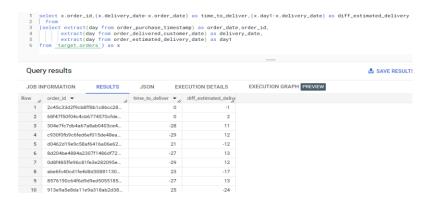
c. Calculate the Total and Average value of order freight for each state.

Soln:



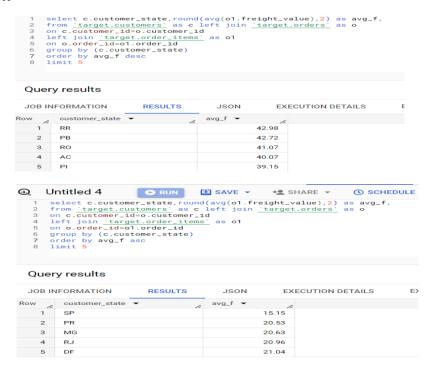
- 5) Analysis based on Sales, freight and sales time.
 - a. Find the no. of days taken to deliver each order from order purchase date as delivery time. Also calculate difference between estimated delivery time delivery time

soln:

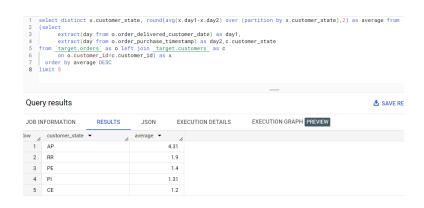


b. Find out the top 5 states with the highest and lowest average freight value.

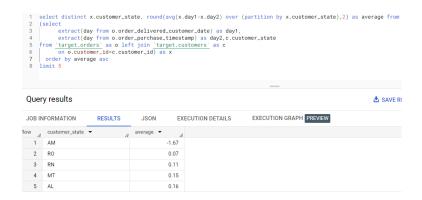
Soln:



c. Find out the top 5 states with the highest and lowest delivery time. Soln: Highest delivery time:



Lowest delivery time:



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

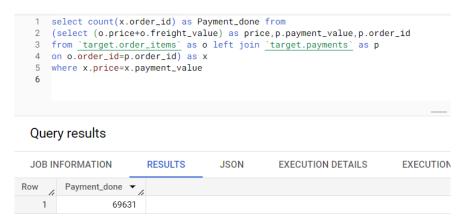


6) Analysis based on the payments

a. Find the month on month no of order placed using different payment type. Soln:

1 select distinct extract(month from order_purchase_timestamp) as months, 2 extract(year from order_purchase_timestamp) as years, 3 count(o.order_id)as no_of_orders,p.payment_type 4 from 'target.payments' as p left join 'target.orders' as o 5 on p.order_id=o.order_id 6 group by years,months,p.payment_type 7 order by years,months ASC Query results						
JOB IN	IFORMATION	RESULTS	JSON	EXECUTION	DETAILS	EXECUTION GRAPH PREVIEW
Row	months ▼	years ▼	11	no_of_orders ▼	payment_type •	
1	9	201	16	3	credit_card	
2	10	20	16	254	credit_card	
3	10	20	16	23	voucher	
4	10	20	16	2	debit_card	
5	10	20	16	63	UPI	
6	12	20	16	1	credit_card	
7	1	20	17	61	voucher	
8	1	20	17	197	UPI	
9	1	20	17	583	credit_card	
10	1	20	17	9	debit card	

b. Find the no. of order placed on the basis of the payment installments that have been paid.



Overall Observation:

- Company have reach over all the 27 states in the country.
- Data shows considerable increase in the number of customers and orders being placed over the years.
- First 8 month sees a good amount of order being placed but it decreases abruptly and the trend continue for next 4 month.
- Some states have very good delivery time as compared to others and there we can clearly see number of customers being increased.
- Variety of Payment methods are available and almost everyone is being used in good numbers.

Red Flags and Suggestions/Strategy:

- Although company have reach over all the 27 states, but most of its customers are limited to few states and there is no sign of good growth rate in those states.
- Good discount offers, faster delivery time, more lenient EMI options, advertisement through local popular stars may help in improving the demand.
- Last 4 month of the year need special attention because in no time the trend can impact other months. More leniency and stock pile of demanded goods during those months can improve. And in long term more advertisement is needed so that people are well aware of the company.