

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

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`  
where table_name = 'customers'
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	customer_id	STRING				
2	customer_unique_id	STRING				
3	customer_zip_code_prefix	INT64				
4	customer_city	STRING				
5	customer_state	STRING				

-

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`  
where table_name = 'geolocation'
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	geolocation_zip_code_prefix	INT64				
2	geolocation_lat	FLOAT64				
3	geolocation_lng	FLOAT64				
4	geolocation_city	STRING				
5	geolocation_state	STRING				

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`  
where table_name = 'order_items'
```

Query results

SAVE RESULTS

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	order_id	STRING				
2	order_item_id	INT64				
3	product_id	STRING				
4	seller_id	STRING				
5	shipping_limit_date	TIMESTAMP				
6	price	FLOAT64				
7	freight_value	FLOAT64				

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`  
  
where table_name = 'order_reviews'
```

Query results

SAVE RESULTS

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	review_id	STRING				
2	order_id	STRING				
3	review_score	INT64				
4	review_comment_title	STRING				
5	review_creation_date	TIMESTAMP				
6	review_answer_timestamp	TIMESTAMP				

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`  
where table_name = 'orders'
```


Query results

SAVE RESULTS

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	order_id	STRING				
2	customer_id	STRING				
3	order_status	STRING				
4	order_purchase_timestamp	TIMESTAMP				
5	order_approved_at	TIMESTAMP				
6	order_delivered_carrier_date	TIMESTAMP				
7	order_delivered_customer_date	TIMESTAMP				
8	order_estimated_delivery_date	TIMESTAMP				

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`
where table_name = 'payments'
```

Query results


 SAVE RESULTS ▾

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	column_name	data_type
1	order_id	STRING
2	payment_sequential	INT64
3	payment_type	STRING
4	payment_installments	INT64
5	payment_value	FLOAT64

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`
where table_name = 'products'
```

Query results

 SAVE RESULTS ▾

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	column_name	data_type
1	product_id	STRING
2	product_category	STRING
3	product_name_length	INT64
4	product_description_length	INT64
5	product_photos_qty	INT64
6	product_weight_g	INT64
7	product_length_cm	INT64
8	product_height_cm	INT64
9	product_width_cm	INT64

```
select column_name, data_type from `sqlbusinesscase-384615.SQLAssignment.INFORMATION_SCHEMA.COLUMNS`
where table_name = 'sellers'
```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	column_name	data_type				
1	seller_id	STRING				
2	seller_zip_code_prefix	INT64				
3	seller_city	STRING				
4	seller_state	STRING				

B. Time period for which the data is given

```
select min(order_purchase_timestamp) as start_time, max(order_purchase_timestamp) as end_time
from `sqlbusinesscase-384615.SQLAssignment.orders`
```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	start_time	end_time				
1	2016-09-04 21:15:19 UTC	2018-10-17 17:30:18 UTC				

Insights :

The time period is calculated based on the data in 'Orders' table. start_time and end_time gives the total period for which the data is given.

C. Cities and States of customers ordered during the given period

```
select c1.customer_city, c1.customer_state from `sqlbusinesscase-384615.SQLAssignment.customers` c1
join
`sqlbusinesscase-384615.SQLAssignment.orders` ord
on c1.customer_id = ord.customer_id
where ord.order_purchase_timestamp between
(select min(order_purchase_timestamp) from `sqlbusinesscase-384615.SQLAssignment.orders`) and
(select max(order_purchase_timestamp) from `sqlbusinesscase-384615.SQLAssignment.orders`)
```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	customer_city	customer_state				
1	acu	RN				
2	acu	RN				
3	acu	RN				
4	ico	CE				
5	ico	CE				
6	ico	CE				
7	ico	CE				
8	ico	CE				
9	ico	CE				
10	ico	CE				

2. In-depth Exploration:

- A. Is there a growing trend on e-commerce in Brazil? How can we describe a complete scenario? Can we see some seasonality with peaks at specific months?

```
select temp.year, temp.month, temp.order_count, rank() over(partition by year
order by order_count desc) as order_quantity_rank from (
select count(order_id) order_count , extract(year from order_purchase_times
tamp) as year,
extract(month from order_purchase_timestamp) as month from `sqlbusinesscase
-384615.SQLAssignment.orders` o
group by extract(month from order_purchase_timestamp), extract(year from ord
er_purchase_timestamp)) temp
order by temp.year, temp.month
```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	year	month	order_count	order_quantity_rank		
1	2016	9	4	2		
2	2016	10	324	1		
3	2016	12	1	3		
4	2017	1	800	12		
5	2017	2	1780	11		
6	2017	3	2682	9		
7	2017	4	2404	10		
8	2017	5	3700	7		
9	2017	6	3245	8		
10	2017	7	4026	6		
11	2017	8	4331	4		
12	2017	9	4285	5		
13	2017	10	4631	3		


Insights:

We can see the trend of orders/purchase frequency above in both columns 'order_count' and 'order_quantity_rank'. The output is based on every month and every year.

- B. What time do Brazilian customers tend to buy (Dawn, Morning, Afternoon or Night)?

```
select max(t1), buyTime from
select customer_id,temp.buyTime, count(temp.buyTime) over(partition by temp
.buyTime) t1 from
(select customer_id,case
when (extract(hour from order_purchase_timestamp)) between 0 and 6 then 'Dawn'
when (extract(hour from order_purchase_timestamp)) between 7 and 12 then 'Morning'
when (extract(hour from order_purchase_timestamp)) between 13 and 18 then 'Afternoon'
else 'Night'
end as buyTime
from `sqlbusinesscase-384615.SQLAssignment.orders`) temp) temp1
group by temp1.buyTime;
```

Query results

 SAVE RESULTS

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	f0_	buyTime	
1	5242	Dawn	
2	27733	Morning	
3	28331	Night	
4	38135	Afternoon	

Insights : Brazilian customers tend to buy more during 'Afternoon'

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

- A. Get month on month orders by states

```
select * from
(select extract(month from o.order_purchase_timestamp) as month, c.customer
_state, count(o.order_id) order_count from `sqlbusinesscase-
384615.SQLAssignment.orders` o
join
`sqlbusinesscase-384615.SQLAssignment.customers` c
on o.customer_id = c.customer_id
group by c.customer_state,month) temp
order by temp.month, temp.customer_state
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	month	customer_state	order_count			
1	1	AC	8			
2	1	AL	39			
3	1	AM	12			
4	1	AP	11			
5	1	BA	264			
6	1	CE	99			
7	1	DF	151			
8	1	ES	159			
9	1	GO	164			
10	1	MA	66			
11	1	MG	971			
12	1	MS	71			

Insights : Month on month orders by states is sorted for month and state in ascending order.

B. Distribution of customers across the states in Brazil

```
select c.customer_state, count(c.customer_id) as customer from `sqlbusiness
case-384615.SQLAssignment.customers` c
group by c.customer_state
order by c.customer_state
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	customer_state	customer				
1	AC	81				
2	AL	413				
3	AM	148				
4	AP	68				
5	BA	3380				
6	CE	1336				
7	DF	2140				
8	ES	2033				
9	GO	2020				
10	MA	747				
11	MG	11635				
12	MS	715				

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

- A. Get % increase in cost of orders from 2017 to 2018 (include months between Jan to Aug only) - You can use "payment_value" column in payments table

```
select temp1.*,LAG(order_sum) over(order by temp1.year,temp1.month)as prev_order_sum,
round(((order_sum-
LAG(order_sum) over(order by temp1.year,temp1.month))/LAG(order_sum) over(o
rder by temp1.year,temp1.month))*100,2) as percentage_increase from
(select temp.month,temp.year,round(sum(temp.payment_value),0) order_sum fro
m
(select *, extract(month from o.order_purchase_timestamp) as month, extract
(year from o.order_purchase_timestamp) as year from
`sqlbusinesscase-384615.SQLAssignement.orders` o
join
`sqlbusinesscase-384615.SQLAssignement.payments` p
on p.order_id = o.order_id
where extract(month from o.order_purchase_timestamp) between 1 and 8
order by o.order_purchase_timestamp) temp
group by temp.year,temp.month
) temp1
order by temp1.year, temp1.month
```

Query results							SAVE RESULTS
JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row	month	year	order_sum	prev_order_sum	percentage_incr		
1	1	2017	138488.0	null	null		
2	2	2017	291908.0	138488.0	110.78		
3	3	2017	449864.0	291908.0	54.11		
4	4	2017	417788.0	449864.0	-7.13		
5	5	2017	592919.0	417788.0	41.92		
6	6	2017	511276.0	592919.0	-13.77		
7	7	2017	592383.0	511276.0	15.86		
8	8	2017	674396.0	592383.0	13.84		
9	1	2018	1115004.0	674396.0	65.33		
10	2	2018	992463.0	1115004.0	-10.99		

- B. Mean & Sum of price and freight value by customer state

```
select c.customer_state,round(sum(i.price),2) price_sum, round(sum(i.freigh
t_value),2) freight_sum,
round(avg(i.price),2) price_mean,
```



```

round(avg(i.freight_value),2) freight_mean,
from `sqlbusinesscase-384615.SQLAssignement.customers` c
join
`sqlbusinesscase-384615.SQLAssignement.orders` o
on c.customer_id = o.customer_id
join
`sqlbusinesscase-384615.SQLAssignement.order_items` i
on i.order_id = o.order_id
group by c.customer_state

```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row	customer_state	price_sum	freight_sum	price_mean	freight_mean		
1	MT	156453.53	29715.43	148.3	28.17		
2	MA	119648.22	31523.77	145.2	38.26		
3	AL	80314.81	15914.59	180.89	35.84		
4	SP	5202955.05	718723.07	109.65	15.15		
5	MG	1585308.03	270853.46	120.75	20.63		
6	PE	262788.03	59449.66	145.51	32.92		
7	RJ	1824092.67	305589.31	125.12	20.96		
8	DF	302603.94	50625.5	125.77	21.04		
9	RS	750304.02	135522.74	120.34	21.74		
10	SE	58920.85	14111.47	153.04	36.65		
11	PR	683083.76	117851.68	119.0	20.53		
12	PA	178947.81	38699.3	165.69	35.83		

5. Analysis on sales, freight and delivery time

A. Calculate days between purchasing, delivering and estimated delivery

```

select abs(date_diff(order_estimated_delivery_date,order_purchase_timestamp
,day)) as purchase_estimated_delivery_diff,
abs(date_diff(order_delivered_customer_date,order_purchase_timestamp,day))
as purchase_delivery_diff,
abs(date_diff(order_delivered_customer_date,order_estimated_delivery_date,d
ay)) as actual_estimated_delivery_diff,
from `sqlbusinesscase-384615.SQLAssignement.orders`
order by purchase_estimated_delivery_diff desc;

```

Query results

[SAVE RESULTS](#) ▼

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row		purchase_estimated_delivery_diff	purchase_delivery_diff	actual_estimated_delivery_diff		
1		155	20	134		
2		149	3	146		
3		146	6	139		
4		144	null	null		
5		144	null	null		
6		142	null	null		
7		140	16	123		
8		116	7	108		
9		109	54	55		
10		106	null	null		
11		101	63	37		

Insights : ABS() is used to get the difference(positive) in days. ORDER BY() is included to display values other than NULL as first few rows gave NULL values for 'purchase_delivery_diff' and 'actual_estimated_delivery_diff'

B. Find time_to_delivery & diff_estimated_delivery

```
select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date, day)) as time_to_delivery,
abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, day)) as diff_estimated_delivery,from `sqlbusinesscase-384615.SQLAssignment.orders`
```

Query results

[SAVE RESULTS](#) ▼

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row		time_to_delivery	diff_estimated_delivery			
1		7	45			
2		7	44			
3		10	41			
4		6	29			
5		20	40			
6		10	48			
7		28	29			
8		9	35			
9		10	41			
10		6	41			

C. Group data by state, take mean of freight_value, time_to_delivery, diff_estimated_delivery

```
(select round(avg(t.freight_value),2) as freight_avg,
round(avg(t.time_to_delivery),2) as time_to_delivery_avg,
round(avg(t.diff_estimated_delivery),2) as diff_estimated_delivery_avg,
t.customer_state from
(select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date, day)) as time_to_delivery,
abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, day)) as diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state)
```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	freight_avg	time_to_delivery	diff_estimated_delivery	customer_state		
1	28.17	17.51	14.89	MT		
2	38.26	21.2	12.66	MA		
3	35.84	23.99	12.06	AL		
4	15.15	8.26	10.99	SP		
5	20.63	11.52	13.13	MG		
6	32.92	17.79	14.69	PE		
7	20.96	14.69	14.23	RJ		
8	21.04	12.5	12.22	DF		
9	21.74	14.71	14.46	RS		
10	36.65	20.98	13.91	SE		
11	20.53	11.48	13.16	PR		

D. Top 5 states with highest/lowest average freight value - sort in desc/asc limit 5

==> **Highest 5 average freight value**

```
select round(avg(t.freight_value),2) as freight_avg,
t.customer_state as state from
(select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date, day)) as time_to_delivery,
```

```

abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, da
y)) as diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
order by freight_avg desc
limit 5;

```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	freight_avg	state				
1	42.98	RR				
2	42.72	PB				
3	41.07	RO				
4	40.07	AC				
5	39.15	PI				

==> Lowest 5 average freight value

```

select round(avg(t.freight_value),2) as freight_avg,
t.customer_state as state from
(select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date,
day)) as time_to_delivery,
abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, da
y)) as diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
order by freight_avg
limit 5;

```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	freight_avg	state				
1	15.15	SP				
2	20.53	PR				
3	20.63	MG				
4	20.96	RJ				
5	21.04	DF				

E. Top 5 states with highest/lowest average time to delivery

==> Top 5 states with highest average time to delivery

```
select
round(avg(t.time_to_delivery),2) as time_to_delivery_avg,
t.customer_state as state from
(select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date,
day)) as time_to_delivery,
abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, da
y)) as diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
order by time_to_delivery_avg DESC
limit 5;
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	time_to_delivery_avg	state				
1	27.83	RR				
2	27.75	AP				
3	25.96	AM				
4	23.99	AL				
5	23.3	PA				

==> Top 5 states with lowest average time to delivery

```

select
round(avg(t.time_to_delivery),2) as time_to_delivery_avg,
t.customer_state as state from
(select abs(date_diff(order_purchase_timestamp, order_delivered_customer_date,
day)) as time_to_delivery,
abs(date_diff(order_estimated_delivery_date, order_delivered_customer_date, da
y)) as diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
order by time_to_delivery_avg
limit 5;

```

Query results

[SAVE RESULTS](#) ▾

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	time_to_delivery_avg	state				
1	8.26	SP				
2	11.48	PR				
3	11.52	MG				
4	12.5	DF				
5	14.52	SC				

F. Top 5 states where delivery is really fast/ not so fast compared to estimated date

==> **Top 5 states where delivery is really fast compared to estimated date**

```

select
round(avg(t.diff_estimated_delivery),2) as diff_estimated_delivery_avg,
t.customer_state as state from
(select date_diff(order_purchase_timestamp, order_delivered_customer_date, day
) as time_to_delivery,
date_diff(order_estimated_delivery_date, order_delivered_customer_date, day) a
s diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssignment.orders` o1 join
`sqlbusinesscase-384615.SQLAssignment.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssignment.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
ORDER BY diff_estimated_delivery_avg
LIMIT 5;

```

Query results

[SAVE RESULTS](#) ▼

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	diff_estimated_delivery_avg	state				
1	7.98	AL				
2	9.11	MA				
3	9.17	SE				
4	9.77	ES				
5	10.12	BA				

==> Top 5 states where delivery is really slow compared to estimated date

```
select
round(avg(t.diff_estimated_delivery),2) as diff_estimated_delivery_avg,
t.customer_state as state from
(select date_diff(order_purchase_timestamp, order_delivered_customer_date, day
) as time_to_delivery,
date_diff(order_estimated_delivery_date, order_delivered_customer_date, day) a
s diff_estimated_delivery,
o2.freight_value, c1.customer_state
from `sqlbusinesscase-384615.SQLAssigement.orders` o1 join
`sqlbusinesscase-384615.SQLAssigement.order_items` o2
on o1.order_id = o2.order_id
join
`sqlbusinesscase-384615.SQLAssigement.customers` c1
on o1.customer_id = c1.customer_id) t
group by t.customer_state
ORDER BY diff_estimated_delivery_avg desc
LIMIT 5;
```

Query results

[SAVE RESULTS](#) ▼

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	diff_estimated_delivery_avg	state				
1	20.01	AC				
2	19.08	RO				
3	18.98	AM				
4	17.44	AP				
5	17.43	RR				

6. Payment type analysis:

A. Month over Month count of orders for different payment types

```
select * from (
select count(o.order_id) as order_count, (extract(month from o.order_purchase_timestamp)) as month, p.payment_type from `sqlbusinesscase-384615.SQLAssignment.orders` o
join
`sqlbusinesscase-384615.SQLAssignment.payments` p
on o.order_id = p.order_id
group by extract(month from o.order_purchase_timestamp), p.payment_type) as
temp
order by temp.month, temp.payment_type
```

Query results

[SAVE RESULTS](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	order_count	month	payment_type			
1	1715	1	UPI			
2	6103	1	credit_card			
3	118	1	debit_card			
4	477	1	voucher			
5	1723	2	UPI			
6	6609	2	credit_card			
7	82	2	debit_card			
8	424	2	voucher			
9	1942	3	UPI			
10	7707	3	credit_card			
11	109	3	debit_card			
12	591	3	voucher			

Insights : the result shows the total number of orders for every month for every payment mode. Result is sorted on both month wise and payment_type wise in ascending order

B. Count of orders based on the no. of payment installments

```
select count(o.order_id) as order_count, p.payment_installments from `sqlbusinesscase-384615.SQLAssignment.orders` o
join
`sqlbusinesscase-384615.SQLAssignment.payments` p
on o.order_id = p.order_id
group by p.payment_installments
order by p.payment_installments
```


Query results

 [SAVE RESULTS](#) 

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	order_count	payment_installments				
1	2	0				
2	52546	1				
3	12413	2				
4	10461	3				
5	7098	4				
6	5239	5				
7	3920	6				
8	1626	7				
9	4268	8				
10	644	9				
11	5328	10				

Insights : The query result gives the order count based on no of payment installments in ascending order