Select column\_name, data\_type from

`Business\_case\_Study.INFORMATION\_SCHEMA.COLUMNS`

where table\_name = ‘Customers’  
  
Select min(order\_purchase\_timestamp) First\_order\_datetime,

max(order\_purchase\_timestamp) last\_order\_datetime

from `Business\_case\_Study.Orders`  
  
  
Select count(distinct customer\_city) as Unique\_city\_count,

count(distinct customer\_state) as Unique\_state\_count

from `Business\_case\_Study.Orders` as O

left join `Business\_case\_Study.Customers` as CC

on O.customer\_id = CC.customer\_id  
  
  
Select extract(year from order\_purchase\_timestamp) Year\_,

format\_datetime("%B",order\_purchase\_timestamp ) as month\_name ,

count(\*) as Total\_order

from `Business\_case\_Study.Orders`

group by year\_, month\_name, extract(month from order\_purchase\_timestamp)

order by year\_, extract(month from order\_purchase\_timestamp)  
  
  
  
With Monthly\_orders as (

Select format\_date("%B",order\_purchase\_timestamp ) as Year\_month,

count(\*) as Total\_order

from `Business\_case\_Study.Orders`

GROUP BY year\_month

order by total\_order desc)

Select year\_month, monthly\_orders.Total\_order, Sum(monthly\_orders.Total\_order)

over(order by monthly\_orders.Total\_order desc) Running\_Orders,

Round(Sum(monthly\_orders.Total\_order)

over(order by monthly\_orders.Total\_order desc)/(select sum(monthly\_orders.Total\_order) from monthly\_orders)\*100,2) Running\_order\_percentage,

from monthly\_orders

order by monthly\_orders.Total\_order desc  
  
  
  
  
Select case

when extract(hour from order\_purchase\_timestamp)>=0 and extract(hour from order\_purchase\_timestamp)<=6 then "Dawn"

when extract(hour from order\_purchase\_timestamp)>6 and extract(hour from order\_purchase\_timestamp)<=12 then "Mornings"

when extract(hour from order\_purchase\_timestamp)>12 and extract(hour from order\_purchase\_timestamp)<=18 then "Afternoon"

when extract(hour from order\_purchase\_timestamp)>18 and extract(hour from order\_purchase\_timestamp)<=23 then "Night"

end as Time\_of\_the\_day,

count(order\_purchase\_timestamp) total\_orders

from `Business\_case\_Study.Orders`

group by Time\_of\_the\_day

order by total\_orders desc

Select customer\_state,

extract(Year from order\_purchase\_timestamp) year\_,

format\_datetime("%B", order\_purchase\_timestamp) as month\_name,

count(order\_id) as Total\_order

from `Business\_case\_Study.Orders` as o

left join `Business\_case\_Study.Customers` as cc

on o.customer\_id = cc.customer\_id

group by year\_,customer\_state,month\_name,extract(Month from order\_purchase\_timestamp)

order by customer\_state,year\_,extract(Month from order\_purchase\_timestamp)

Select customer\_state ,count(distinct customer\_unique\_id) Customer\_count

from `Business\_case\_Study.Customers`

group by customer\_state

order by customer\_count desc

Select year\_,cost\_of\_order,

Round(((lead(cost\_of\_order,1) over(order by cost\_of\_order)-cost\_of\_order)/cost\_of\_order)\*100,2)Percentage\_increase

from (

Select extract(year from order\_purchase\_timestamp) year\_,

Round(sum(pp.payment\_value),0) as cost\_of\_order

from `Business\_case\_Study.Orders` as OO

left join `Business\_case\_Study.Payments` as pp

on OO.order\_id = pp.order\_id

where extract(month from order\_purchase\_timestamp) in (1,2,3,4,5,6,7,8)

group by year\_

) as z

order by z.year\_

Select cc.customer\_state , Round(sum(price),2) Total\_price ,

Round(sum(price)/count(distinct oo.order\_id),2)as Average\_price

from `Business\_case\_Study.Orders` as oo

left join `Business\_case\_Study.Customers` as cc

on oo.customer\_id = cc.customer\_id

left join `Business\_case\_Study.Order\_items` as oi

on oo.order\_id = oi.order\_id

group by cc.customer\_state

order by Total\_price desc

Select cc.customer\_state , Round(sum(freight\_value),2) Total\_Freight ,

Round(sum(freight\_value)/count(distinct oo.order\_id),2)as Average\_Freight

from `Business\_case\_Study.Orders` as oo

left join `Business\_case\_Study.Customers` as cc

on oo.customer\_id = cc.customer\_id

left join `Business\_case\_Study.Order\_items` as oi

on oo.order\_id = oi.order\_id

group by cc.customer\_state

order by Total\_Freight desc

Select order\_id, date\_diff(order\_delivered\_customer\_date, order\_purchase\_timestamp, Day) as time\_to\_deliver,

date\_diff(order\_delivered\_customer\_date, order\_estimated\_delivery\_date, Day) as diff\_estimated\_delivery

from `Business\_case\_Study.Orders`

order by time\_to\_deliver desc

with Avg\_value as (

Select customer\_state, Avg(freight\_value) as Avg\_freight\_value from `Business\_case\_Study.Orders` as o

left join `Business\_case\_Study.Order\_items` as oi

on o.order\_id = oi.order\_id

left join `Business\_case\_Study.Customers` as cc

on o.customer\_id = cc.customer\_id

group by customer\_state),

Ranked\_states as (

select customer\_state, Avg\_freight\_value,

row\_number() over(order by Avg\_freight\_value desc) as desc\_rank,

row\_number() over(order by Avg\_freight\_value asc) as asc\_rank

from Avg\_value

)

Select customer\_state, Avg\_freight\_value from Ranked\_states

where desc\_rank <=5 or asc\_rank <=5

ORDER BY avg\_freight\_value asc;

With Avg\_value as (

Select customer\_state, Avg(date\_diff(order\_delivered\_customer\_date, order\_purchase\_timestamp,Day)) as Avg\_delivery\_time

from `Business\_case\_Study.Orders` as o

left join `Business\_case\_Study.Customers` as cc

on o.customer\_id = cc.customer\_id

group by customer\_state),

ranked\_states as (

select customer\_state, Avg\_delivery\_time,

row\_number() over(order by Avg\_delivery\_time desc) as desc\_rank,

row\_number() over(order by Avg\_delivery\_time asc) as asc\_rank

from Avg\_value

)

Select customer\_state, Avg\_delivery\_time from ranked\_states

where desc\_rank <=5 or asc\_rank <=5

ORDER BY Avg\_delivery\_time

Select customer\_state, Avg(date\_diff(order\_delivered\_customer\_date,order\_purchase\_timestamp, DAY))-Avg(date\_diff(order\_delivered\_customer\_date,order\_estimated\_delivery\_date, DAY))

from `Business\_case\_Study.Orders` as oo

left join `Business\_case\_Study.Customers` as cc

on oo.customer\_id = cc.customer\_id

where order\_delivered\_customer\_date is not null

group by customer\_state

Select extract(Year from order\_purchase\_timestamp) year\_,

format\_datetime("%B",order\_purchase\_timestamp ) as month\_name,

payment\_type, count(\*) as Total\_orders

from `Business\_case\_Study.Orders` as OO

left join `Business\_case\_Study.Payments` as p

on oo.order\_id = p.order\_id

group by year\_, month\_name, payment\_type, extract(month from order\_purchase\_timestamp)

order by year\_, extract(month from order\_purchase\_timestamp)

Select payment\_installments, Count(\*) as Total\_orders

from `Business\_case\_Study.Orders` as OO

left join `Business\_case\_Study.Payments` as pp

on oo.order\_id = pp.order\_id

where payment\_installments is not null and payment\_installments <> 0

group by payment\_installments

order by Total\_orders desc