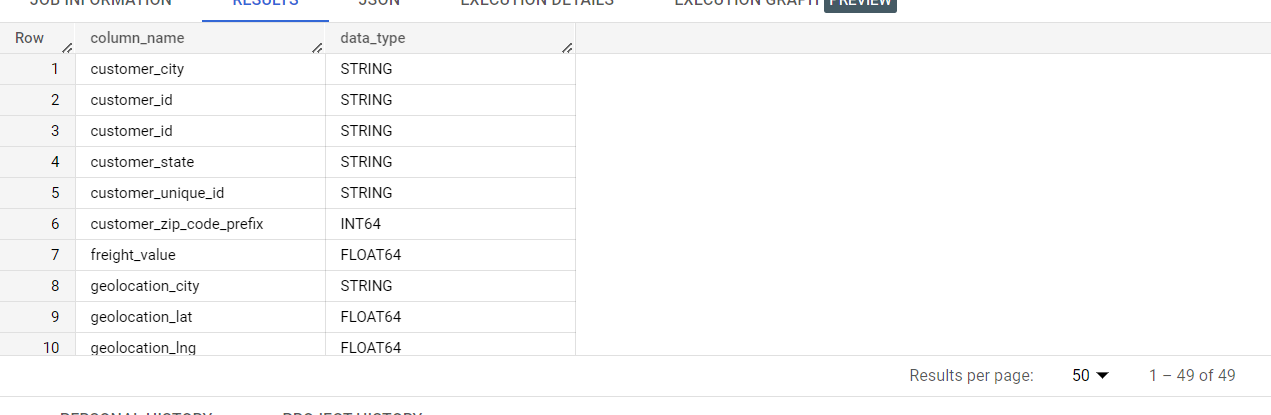
Q1(a)

SELECT column\_name,data\_type FROM target-382417.Target\_sql\_businesscase.INFORMATION\_SCHEMA.COLUMNS

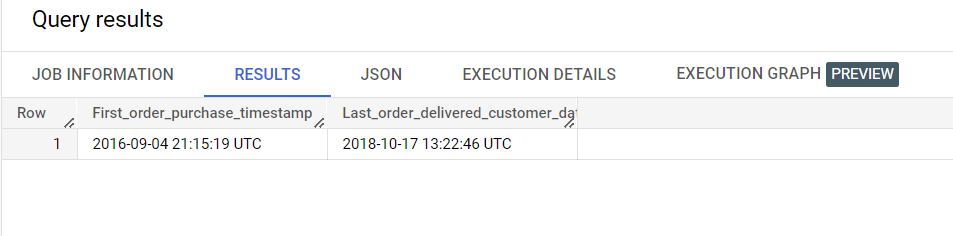
order by column\_name



--Q1(b)

select min(order\_purchase\_timestamp) as First\_order\_purchase\_timestamp,max(order\_delivered\_customer\_date) as Last\_order\_delivered\_customer\_date

from `Target\_sql\_businesscase.orders`

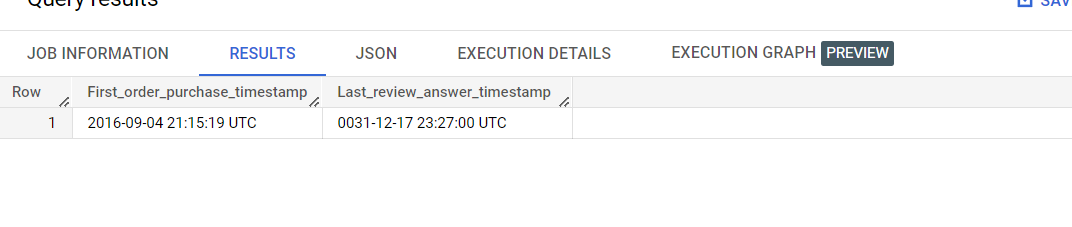


--Q1(b)with respect to review answerdate

select min(o.order\_purchase\_timestamp) as First\_order\_purchase\_timestamp,max(ore.review\_answer\_timestamp) as Last\_review\_answer\_timestamp

from `Target\_sql\_businesscase.orders` as o left  join `target-382417.Target\_sql\_businesscase.order\_reviews` as ore

on o.order\_id=ore.order\_id



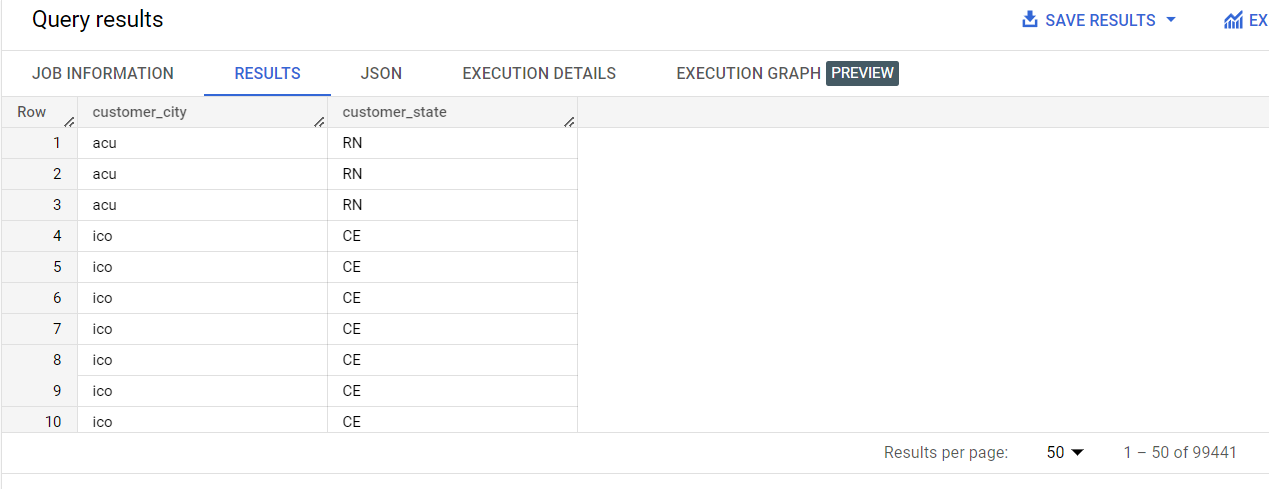
--Q1(c) every customer has done order so we can just find customer state from customer table only.

select c.customer\_city,c.customer\_state

from `target-382417.Target\_sql\_businesscase.customers` as c

join `target-382417.Target\_sql\_businesscase.orders` as o

on c.customer\_id=o.customer\_id



(II)Every customer has made order.

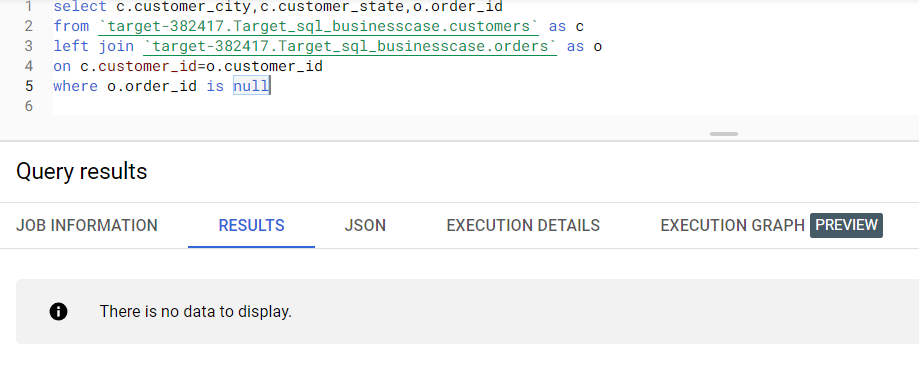
select c.customer\_city,c.customer\_state,o.order\_id

from `target-382417.Target\_sql\_businesscase.customers` as c

left join `target-382417.Target\_sql\_businesscase.orders` as o

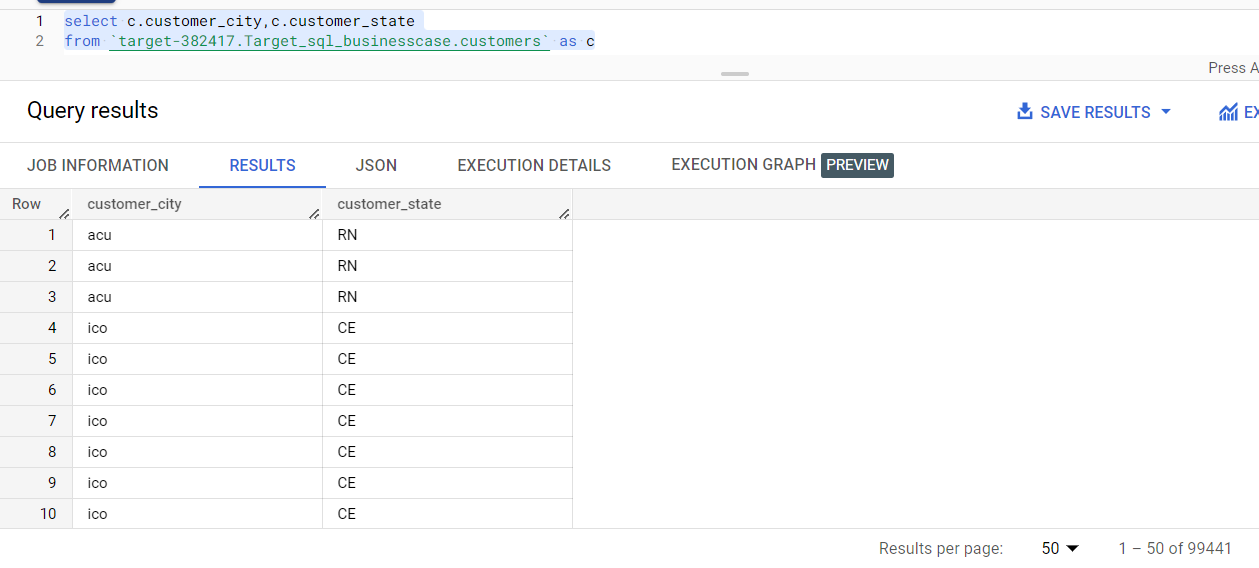
on c.customer\_id=o.customer\_id

where o.order\_id is null



select c.customer\_city,c.customer\_state

from `target-382417.Target\_sql\_businesscase.customers` as c

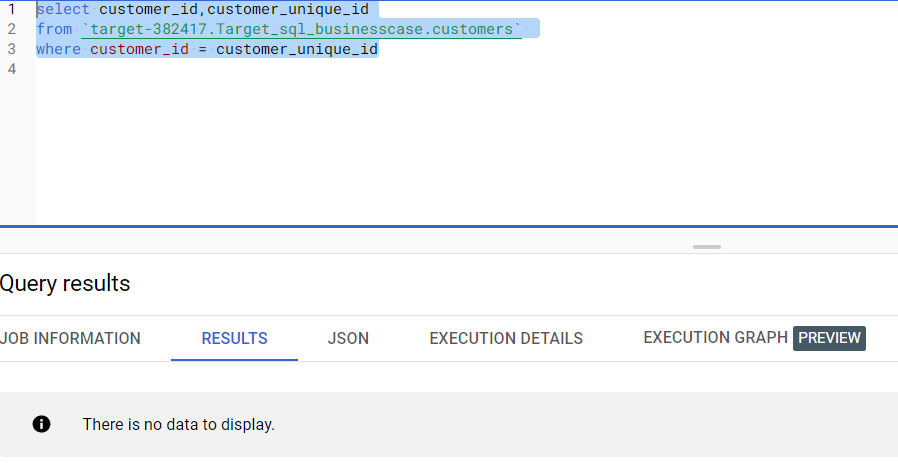


Note: Customer\_id and customer\_unique\_id are different.

select customer\_id,customer\_unique\_id

from `target-382417.Target\_sql\_businesscase.customers`

where customer\_id = customer\_unique\_id



Q3(a)

select  extract(MONTH FROM o.order\_purchase\_timestamp) AS Month,extract(YEAR FROM o.order\_purchase\_timestamp) AS Year,c.customer\_state,

count(distinct o.order\_id) as Number\_of\_orders

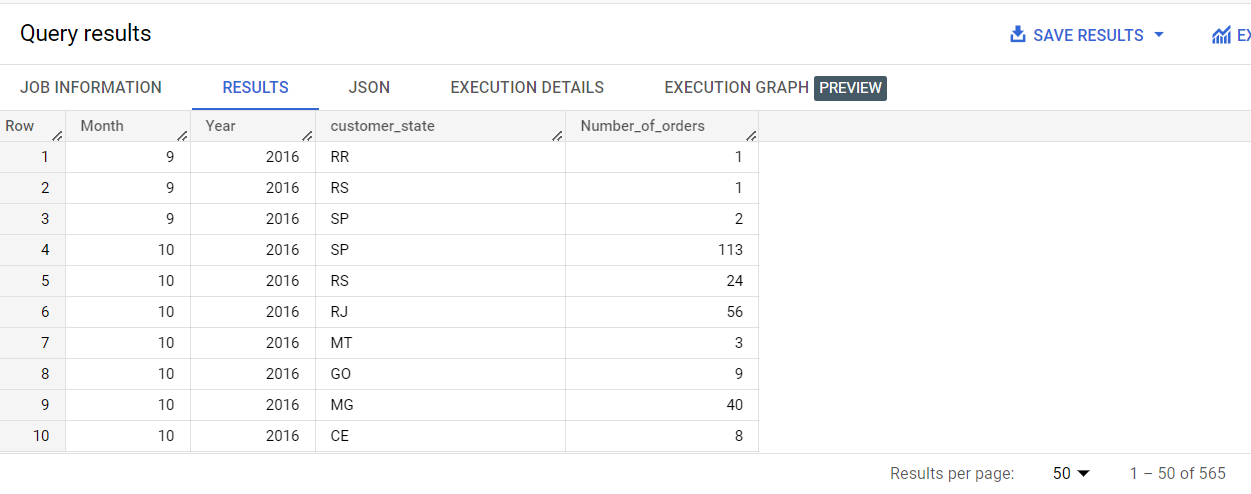
from `target-382417.Target\_sql\_businesscase.orders` as o

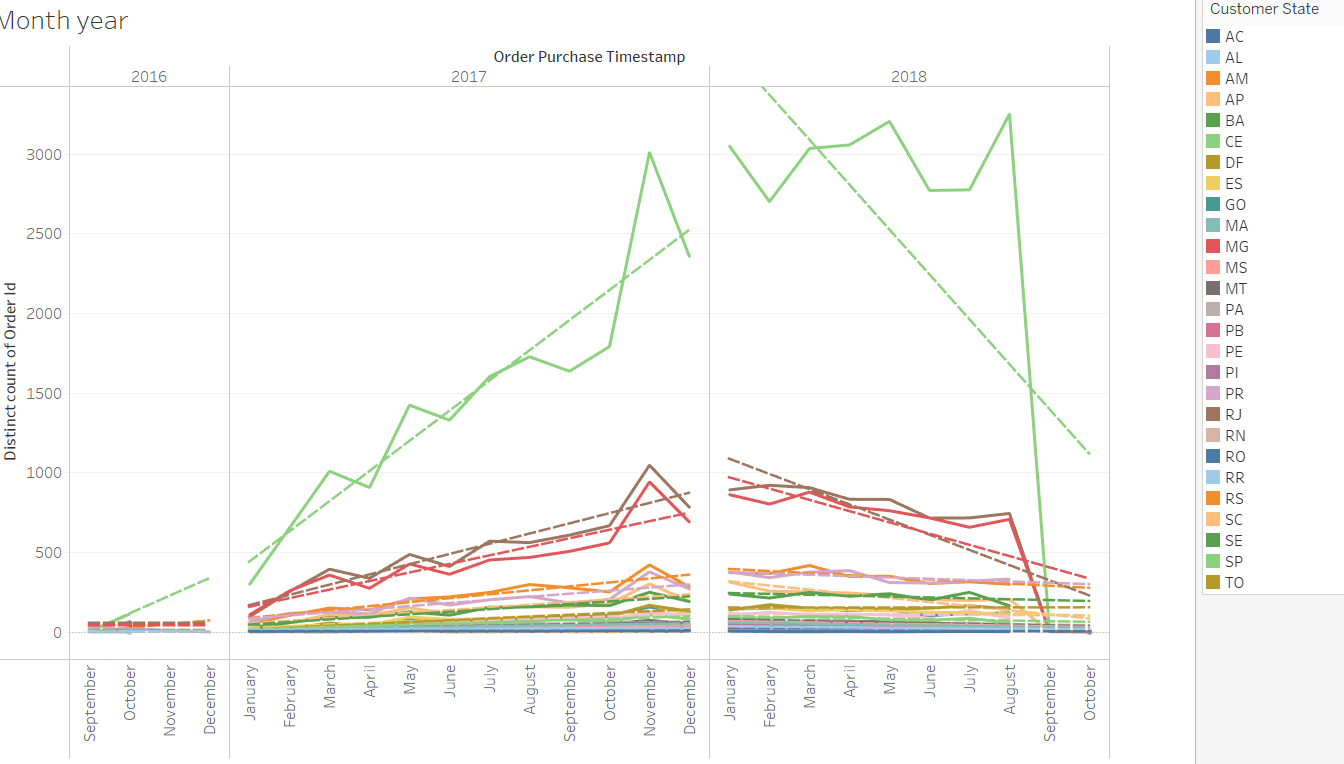
join  `target-382417.Target\_sql\_businesscase.customers` as c

on c.customer\_id=o.customer\_id

group by Month,Year,c.customer\_state

order by Year,Month





Month on month :

select extract(MONTH FROM o.order\_purchase\_timestamp) AS Month,c.customer\_state,count(distinct o.order\_id) as Number\_of\_orders

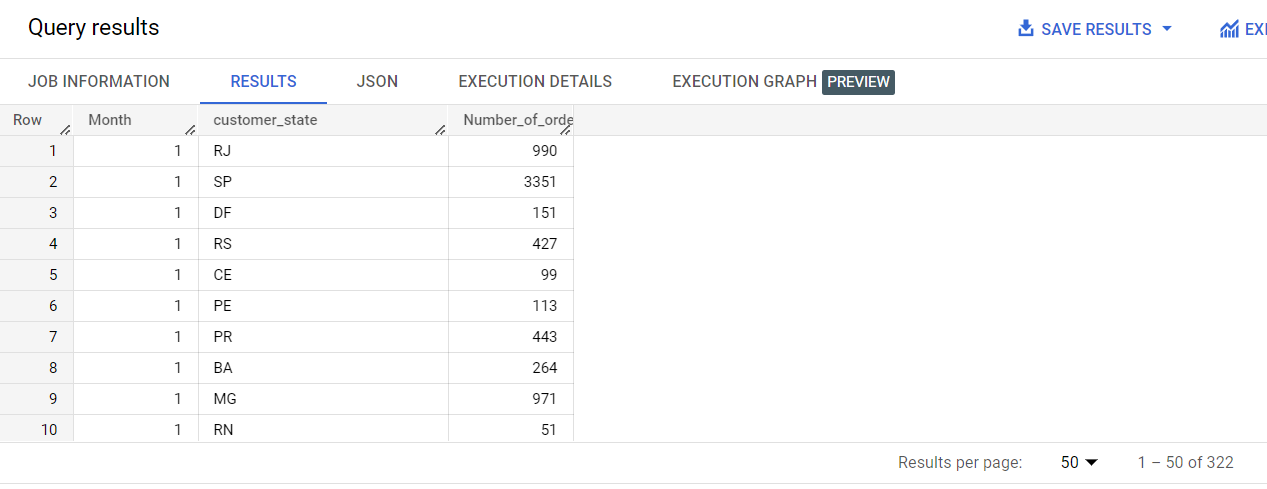
from `target-382417.Target\_sql\_businesscase.orders` as o

join  `target-382417.Target\_sql\_businesscase.customers` as c

on c.customer\_id=o.customer\_id

group by Month,c.customer\_state

order by Month

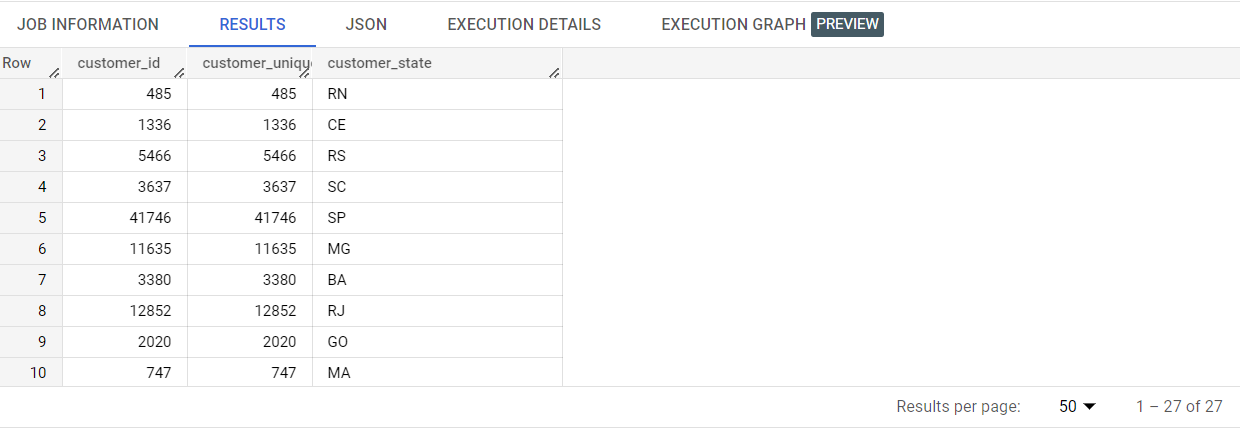


Q3(b)

select count(customer\_id) as customer\_id,count(customer\_unique\_id) as customer\_unique\_id,customer\_state

from `target-382417.Target\_sql\_businesscase.customers`

group by customer\_state



Each customer has made purchase as number of customer\_id and customer\_nuiqe\_id are equal.

Q2(a) select extract(YEAR FROM o.order\_purchase\_timestamp) AS Year,

count(distinct o.order\_id) as Number\_of\_orders

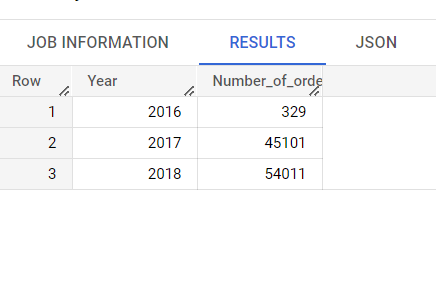
from `target-382417.Target\_sql\_businesscase.orders` as o

join  `target-382417.Target\_sql\_businesscase.customers` as c

on c.customer\_id=o.customer\_id

group by Year

order by Year



**Inner Join**

select  extract(YEAR FROM o.order\_purchase\_timestamp) AS Year, count(distinct o.order\_id) as Number\_of\_orders,sum(p.payment\_value) as Total\_payment,

from `target-382417.Target\_sql\_businesscase.orders` as o

join  `target-382417.Target\_sql\_businesscase.payments`as p

on o.order\_id=p.order\_id

group by Year

order by Year



Note: One order has not received payment

**Left join code**

select  extract(YEAR FROM o.order\_purchase\_timestamp) AS Year, count(distinct o.order\_id) as Number\_of\_orders,sum(p.payment\_value) as Total\_payment,

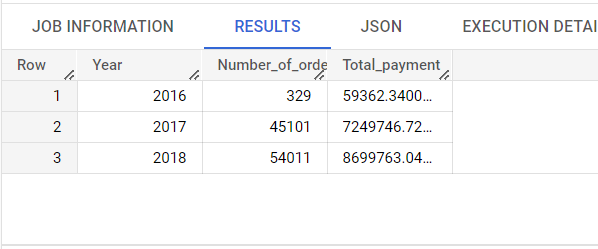
from `target-382417.Target\_sql\_businesscase.orders` as o

left join  `target-382417.Target\_sql\_businesscase.payments`as p

on o.order\_id=p.order\_id

group by Year

order by Year



Q4(a)

SELECT c.customer\_state,sum(oi.price) as Price,sum(oi.freight\_value) as Freight\_value,sum(price+freight\_value)as Sum\_Price\_Freight,

AVG(oi.price) as Mean\_price,AVG(oi.freight\_value) as Mean\_freight,

AVG(price+freight\_value) as Mean\_Price\_Freight

from

`target-382417.Target\_sql\_businesscase.customers` as c

join

`target-382417.Target\_sql\_businesscase.orders` as o

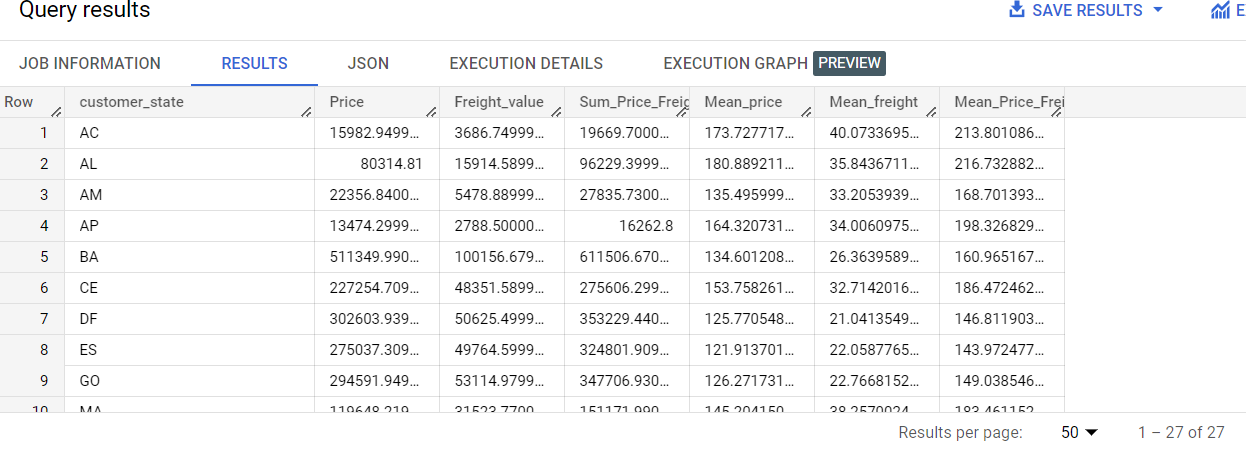
on o.customer\_id=c.customer\_id

left join

`target-382417.Target\_sql\_businesscase.order\_items` as oi

on o.order\_id=oi.order\_id

group by c.customer\_state



**With inner join price with null values will not impact on sum and mean. So both will give same output.**

SELECT c.customer\_state,sum(oi.price) as Price,sum(oi.freight\_value) as Freight\_value, sum(price+freight\_value)as Sum\_Price\_Freight,

AVG(oi.price) as Mean\_price,AVG(oi.freight\_value) as Mean\_freight, AVG(price+freight\_value) as Mean\_Price\_Freight

from

`target-382417.Target\_sql\_businesscase.customers` as c

join

`target-382417.Target\_sql\_businesscase.orders` as o

on o.customer\_id=c.customer\_id

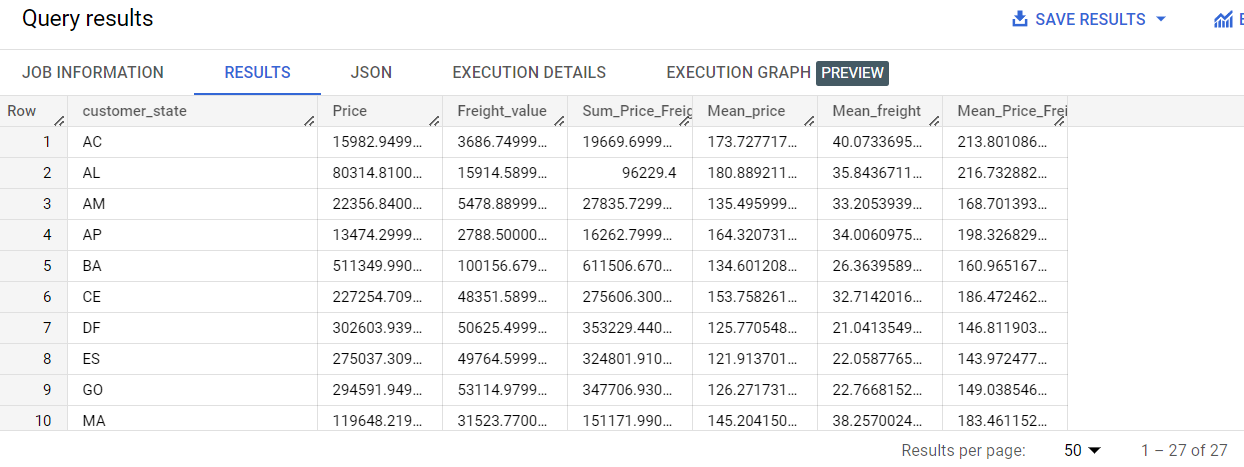
join

`target-382417.Target\_sql\_businesscase.order\_items` as oi

on o.order\_id=oi.order\_id

group by c.customer\_state

order by c.customer\_state



Q. 6(a)

Select  extract(Month from o.order\_purchase\_timestamp) AS Month, p.payment\_type as Payment\_Types,

count (distinct p.order\_id) as Num\_Orders

from `target-382417.Target\_sql\_businesscase.payments`as p

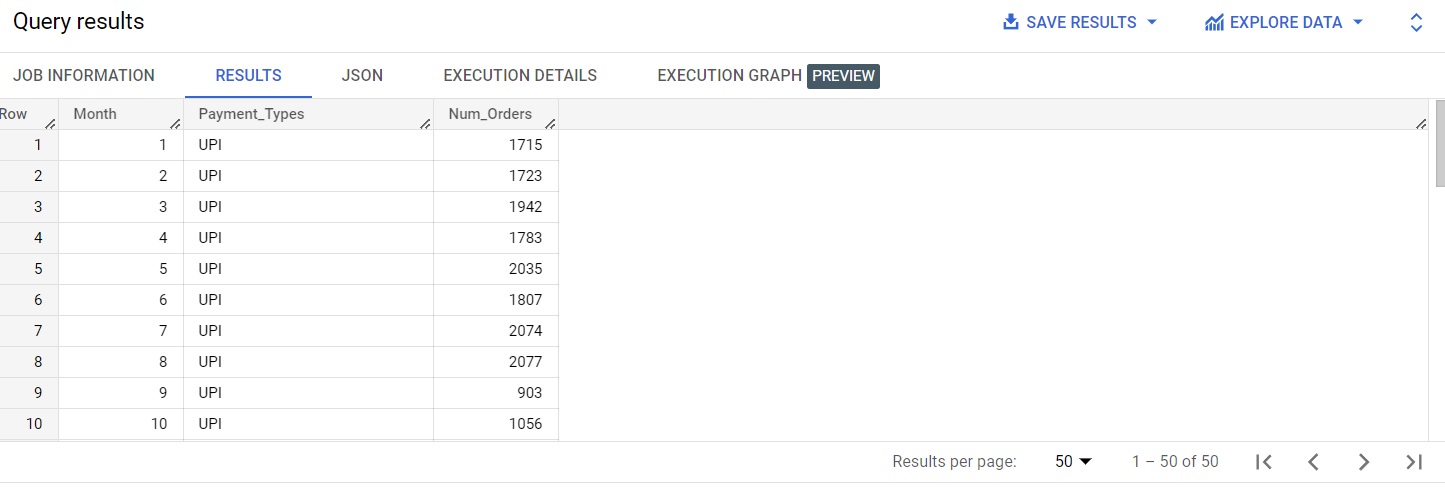
join

`target-382417.Target\_sql\_businesscase.orders` as o

on o.order\_id=p.order\_id

group by Payment\_Types,Month

order by Payment\_Types, Month

 select department\_id as Department, count(employee\_id) as No\_of\_employees,

Case

when count(employee\_id)=1 then "Junior Department"

when count(employee\_id)<=4 then "Intermediate Department"

when count(employee\_id)>4 then "Senior Department"

End As  Department\_level

from employees

group by department\_id

order by No\_of\_employees,Department

select department\_id as Department, count(employee\_id) as No\_of\_employees,

Q. 6(b)

Select  p.payment\_installments as Num\_Payment\_Installments, count (distinct p.order\_id) as Num\_Orders

from `target-382417.Target\_sql\_businesscase.payments`as p

group by Num\_Payment\_Installments

order by Num\_Payment\_Installments

