SQL Challenge

Requests:

1. Provide the list of markets in which customer "Atliq Exclusive" operates its

business in the APAC region.

SELECT distinct(market)

FROM gdb023.dim\_customer

where region = "APAC" and customer = "Atliq Exclusive"

2. What is the percentage of unique product increase in 2021 vs. 2020? The

final output contains these fields,

unique\_products\_2020

unique\_products\_2021

percentage\_chg

with cte1 as (with cte as (SELECT distinct(d.product\_code) ,fiscal\_year

from fact\_sales\_monthly s

join dim\_product d on d.product\_code = s.product\_code )

select

count(case when fiscal\_year = '2020' then 1 else null end) as unique\_product\_2020,

count(case when fiscal\_year = '2021' then 1 else null end) as unique\_product\_2021

from cte)

select unique\_product\_2020,unique\_product\_2021 ,

if (unique\_product\_2021>unique\_product\_2020 ,

round((abs(unique\_product\_2021-unique\_product\_2020)\*100/unique\_product\_2020),2),

round((abs(unique\_product\_2021-unique\_product\_2020)\*100/unique\_product\_2021),2)) as pct

from cte1;

3. Provide a report with all the unique product counts for each segment and

sort them in descending order of product counts. The final output contains

2 fields,

segment

product\_count

select segment,count(distinct(product\_code)) as product\_count

from dim\_product

group by segment

order by product\_count desc;

4. Follow-up: Which segment had the most increase in unique products in

2021 vs 2020? The final output contains these fields,

segment

product\_count\_2020

product\_count\_2021

difference

with cte1 as (with cte as (select distinct(p.product\_code) as product\_count ,s.fiscal\_year,p.segment

from dim\_product p

join fact\_sales\_monthly s on p.product\_code=s.product\_code)

select segment, count(case when fiscal\_year='2020' then 1 else null end) as product\_count\_2020,

count(case when fiscal\_year='2021' then 1 else null end) as product\_count\_2021

from cte

group by segment)

select segment ,product\_count\_2020,product\_count\_2021 ,

if( product\_count\_2021 > product\_count\_2020 ,

(product\_count\_2021-product\_count\_2020) ,

(product\_count\_2020-product\_count\_2021)) as diffrence

from cte1 order by diffrence desc;

5. Get the products that have the highest and lowest manufacturing costs.

The final output should contain these fields,

product\_code

product

manufacturing\_cost

with cte1 as (with cte as (select distinct(p.product\_code) as product\_count ,s.fiscal\_year,p.segment

from dim\_product p

join fact\_sales\_monthly s on p.product\_code=s.product\_code)

select segment, count(case when fiscal\_year='2020' then 1 else null end) as product\_count\_2020,

count(case when fiscal\_year='2021' then 1 else null end) as product\_count\_2021

from cte

group by segment)

select segment ,product\_count\_2020,product\_count\_2021 ,

if( product\_count\_2021 > product\_count\_2020 ,

(product\_count\_2021-product\_count\_2020) ,

(product\_count\_2020-product\_count\_2021)) as diffrence

from cte1 order by diffrence desc;

6. Generate a report which contains the top 5 customers who received an

average high pre\_invoice\_discount\_pct for the fiscal year 2021 and in the

Indian market. The final output contains these fields,

customer\_code

customer

average\_discount\_percentage

SELECT c.customer\_code,c.customer,round(avg(pre.pre\_invoice\_discount\_pct),2) as average\_discount\_percent

FROM fact\_pre\_invoice\_deductions pre

join dim\_customer c on c.customer\_code = pre.customer\_code

where fiscal\_year = '2021' and market='india'

group by c.customer\_code,c.customer

order by average\_discount\_percent desc

limit 5;

7. Get the complete report of the Gross sales amount for the customer “Atliq

Exclusive” for each month. This analysis helps to get an idea of low and

high-performing months and take strategic decisions.

The final report contains these columns:

Month

Year

Gross sales Amount

SELECT month(s.date) as months,year(s.date) as years,

round((sum(g.gross\_price\*s.sold\_quantity)/1000000),2) as gross\_sales\_amount

FROM fact\_gross\_price g

join fact\_sales\_monthly s

on s.product\_code=g.product\_code and s.fiscal\_year=g.fiscal\_year

join dim\_customer c on c.customer\_code=s.customer\_code

where customer= 'Atliq Exclusive'

group by months,years ;

8. In which quarter of 2020, got the maximum total\_sold\_quantity? The final

output contains these fields sorted by the total\_sold\_quantity,

Quarter

total\_sold\_quantity

with cte as

(SELECT month(date) as months,

quarter(date\_add(date,interval 4 month)) as quarters,

(sold\_quantity)

FROM fact\_sales\_monthly

where fiscal\_year='2020')

select sum(sold\_quantity) as total\_sold\_quantity,quarters

from cte

group by quarters

order by total\_sold\_quantity desc;

9. Which channel helped to bring more gross sales in the fiscal year 2021

and the percentage of contribution? The final output contains these fields,

channel

gross\_sales\_mln

percentage

with cte as(SELECT round(sum((sold\_quantity\*gross\_price)/1000000),2) as gross\_sales\_mln ,c.channel

FROM fact\_sales\_monthly s

join fact\_gross\_price g

on g.product\_code=s.product\_code and g.fiscal\_year=s.fiscal\_year

join dim\_customer c on c.customer\_code = s.customer\_code

where s.fiscal\_year = '2021'

group by channel

)

select channel,gross\_sales\_mln, round(gross\_sales\_mln\*100/sum(gross\_sales\_mln) over(),2) as percentage

from cte group by channel

order by percentage desc ;

10. Get the Top 3 products in each division that have a high

total\_sold\_quantity in the fiscal\_year 2021? The final output contains these

fields,

division

product\_code

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product

total\_sold\_quantity

rank\_order

with cte1 as (with cte as (SELECT p.division,p.product,p.product\_code,

sum(sold\_quantity) as total\_sold\_quantity

FROM dim\_product p

join fact\_sales\_monthly s

on s.product\_code = p.product\_code

where fiscal\_year = '2021'

group by p.division ,p.product,p.product\_code

)

select division,product\_code,product,total\_sold\_quantity,

dense\_rank() over(partition by division order by total\_sold\_quantity desc) as rank\_order

from cte)

select \* from cte1

where rank\_order <=3;