**SQL AdHoc Requests Project**

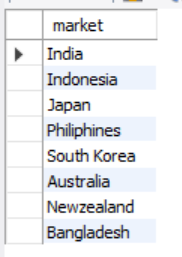
## Q1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region ?

Ans :-

SELECT DISTINCT

market

FROM dim\_customer

WHERE customer = "Atliq Exclusive" AND region = "APAC";

## Q2. What is the percentage of unique product increase in 2021 vs. 2020?

Ans :-

WITH CTE\_1 AS

(

SELECT COUNT( DISTINCT product\_code) AS unique\_products\_2020 FROM fact\_sales\_monthly WHERE fiscal\_year = 2020

),

CTE\_2 AS

(

SELECT COUNT( DISTINCT product\_code) AS unique\_products\_2021 FROM fact\_sales\_monthly WHERE fiscal\_year = 2021

)

-- Main Query :-

SELECT

unique\_products\_2020,

unique\_products\_2021,

ROUND(((unique\_products\_2021 - unique\_products\_2020)\*100.0)/unique\_products\_2020,2) AS Percentage\_Change

FROM CTE\_1

CROSS JOIN CTE\_2;

## 

## Q3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

Ans :-

SELECT

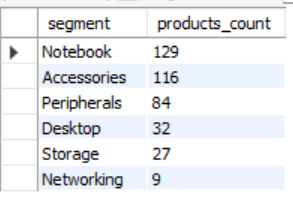
segment,

COUNT( DISTINCT product\_code ) AS products\_count

FROM dim\_product

GROUP BY segment

ORDER BY products\_count DESC;



## Q4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

Ans :-

WITH PC\_20 AS

(

SELECT

p.segment,

COUNT( DISTINCT p.product\_code ) AS product\_count\_2020

FROM dim\_product p

JOIN fact\_sales\_monthly s

ON p.product\_code = s.product\_code

WHERE s.fiscal\_year = 2020

GROUP BY p.segment

),

PC\_21 AS

(

SELECT

p.segment,

COUNT( DISTINCT p.product\_code ) AS product\_count\_2021

FROM dim\_product p

JOIN fact\_sales\_monthly s

ON p.product\_code = s.product\_code

WHERE s.fiscal\_year = 2021

GROUP BY p.segment

)

-- Main Query :-

SELECT

PC\_20.segment,

PC\_20.product\_count\_2020,

PC\_21.product\_count\_2021,

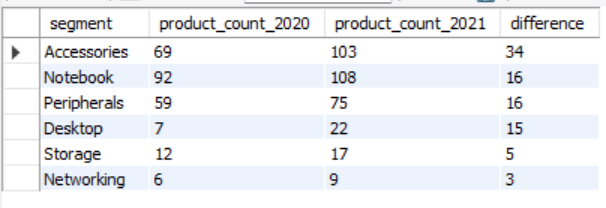
(PC\_21.product\_count\_2021 - PC\_20.product\_count\_2020) AS difference

FROM PC\_20

JOIN PC\_21

ON PC\_20.segment = PC\_21.segment

ORDER BY difference DESC;



## Q5. Get the products that have the highest and lowest manufacturing costs.

Ans :-

WITH Max\_Min\_Cost AS (

SELECT

product\_code,

manufacturing\_cost

FROM fact\_manufacturing\_cost

WHERE manufacturing\_cost = (SELECT MAX(manufacturing\_cost) FROM fact\_manufacturing\_cost)

OR manufacturing\_cost = (SELECT MIN(manufacturing\_cost) FROM fact\_manufacturing\_cost)

)

SELECT

p.product\_code,

p.product,

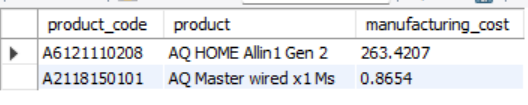
mc.manufacturing\_cost

FROM Max\_Min\_Cost mc

JOIN dim\_product p

ON mc.product\_code = p.product\_code

ORDER BY mc.manufacturing\_cost DESC;



## Q6. 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.

Ans :-

SELECT

c.customer\_code,

c.customer,

ROUND(AVG(pd.pre\_invoice\_discount\_pct),2) AS Avg\_pre\_invoice\_discount\_pct

FROM fact\_pre\_invoice\_deductions pd

JOIN dim\_customer c

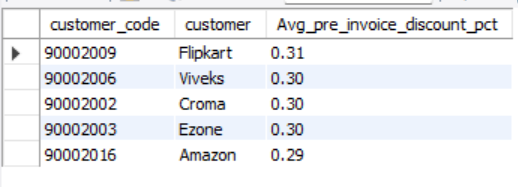
ON pd.customer\_code = c.customer\_code

WHERE pd.fiscal\_year = 2021 AND c.market = 'India'

GROUP BY c.customer\_code,c.customer

ORDER BY Avg\_pre\_invoice\_discount\_pct DESC

LIMIT 5;



## Q7. 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.

Ans :-

SELECT

MONTH(s.date) AS Month,

s.fiscal\_year AS Year,

ROUND(SUM(g.gross\_price \* s.sold\_quantity),2) AS Gross\_Sales\_Amount

FROM fact\_gross\_price g

JOIN fact\_sales\_monthly s

ON g.product\_code = s.product\_code AND g.fiscal\_year = s.fiscal\_year

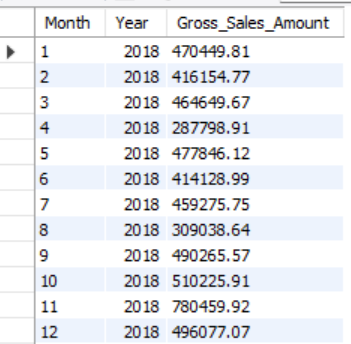
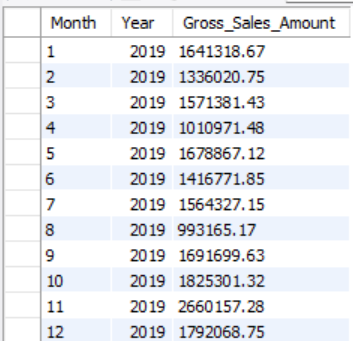
JOIN dim\_customer c

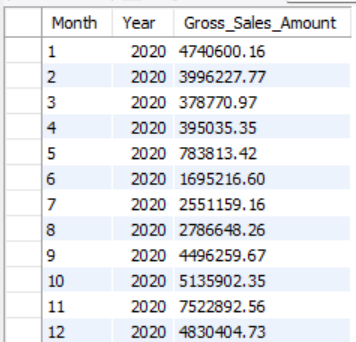
ON s.customer\_code = c.customer\_code

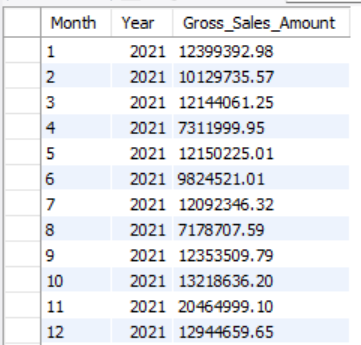
WHERE c.customer = "Atliq Exclusive"

GROUP BY MONTH(s.date),s.fiscal\_year

ORDER BY s.fiscal\_year, MONTH(s.date);







## Q8. In which quarter of 2020, got the maximum total\_sold\_quantity?

Ans :-

SELECT

CASE WHEN MONTHNAME(date) IN ('September','October','November') THEN 'Quarter 1'

WHEN MONTHNAME(date) IN ('December','January','February') THEN 'Quarter 2'

WHEN MONTHNAME(date) IN ('March','April','May') THEN 'Quarter 3'

ELSE 'Quarter 4' END AS Quarter,

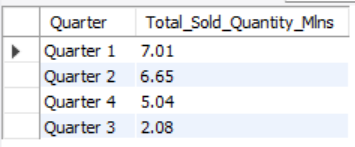
ROUND(SUM(sold\_quantity)/1000000,2) AS Total\_Sold\_Quantity\_Mlns

FROM fact\_sales\_monthly

WHERE fiscal\_year = 2020

GROUP BY Quarter

ORDER BY Total\_Sold\_Quantity\_Mlns DESC;



## Q9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

Ans :-

WITH CTE\_1 AS

(

SELECT

c.channel,

ROUND(SUM(s.sold\_quantity \* g.gross\_price )/1000000,2) AS gross\_price\_mlns

FROM dim\_customer c

JOIN fact\_sales\_monthly s

ON c.customer\_code = s.customer\_code

JOIN fact\_gross\_price g

ON s.product\_code = g.product\_code AND s.fiscal\_year = g.fiscal\_year

WHERE s.fiscal\_year = 2021

GROUP BY c.channel

)

-- Main Query :-

SELECT

channel,

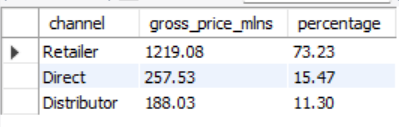
gross\_price\_mlns,

ROUND(gross\_price\_mlns \* 100 / (SELECT SUM(gross\_price\_mlns) FROM CTE\_1),2) AS percentage

FROM CTE\_1

GROUP BY channel

ORDER BY gross\_price\_mlns DESC;



## Q10. Get the Top 3 products in each division that have a high total\_sold\_quantity in the fiscal\_year 2021?

Ans :-

WITH CTE\_1 AS

(

SELECT

p.division,

p.product\_code,

p.product,

SUM(s.sold\_quantity) AS total\_sold\_qty,

DENSE\_RANK() OVER(PARTITION BY p.division ORDER BY SUM(s.sold\_quantity) DESC) AS ranking

FROM dim\_product p

JOIN fact\_sales\_monthly s

ON p.product\_code = s.product\_code

WHERE s.fiscal\_year = 2021

GROUP BY p.division,p.product\_code,p.product

)

-- Main Query :-

SELECT \* FROM CTE\_1 WHERE ranking <= 3;

