**Consumer Goods Project Analysis**

Name*:* Bandi Manoja

Role*:* Data Analyst

ToolsUsed*:* MySQL, Excel

**Problem Statement**

AtliQ Hardwares (imaginary company) is one of the leading computer hardware producers in India and has expanded well in other countries, too. However, the management noticed that they do not get enough insights to make quick and smart data-informed decisions.

**REQUESTS FROM CLENTS**:

1. Provide the markets in which the customer "Atliq Exclusive" operates its business in the APAC region.

**Query:**

SELECT

DISTINCT market

FROM

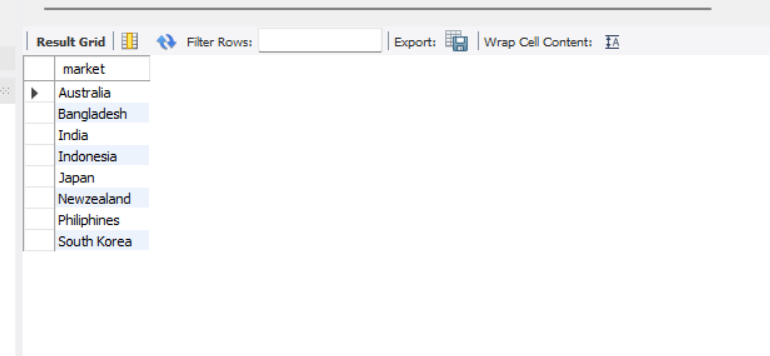
dim\_customer

WHERE customer LIKE "%Atliq Exclusive%"

AND region = "APAC"

Order by Market ;

**Result:**



2. What is the percentage of unique products increased in 2021 vs. 2020? The final output contains these fields,

unique\_products\_2020

unique\_products\_2021

percentage\_chg

**Query:**

WITH CTE\_2020 AS

(

SELECT

count(Distinct p.product\_code) AS unique\_products\_2020

FROM dim\_product p

JOIN fact\_sales\_monthly s

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

WHERE s.fiscal\_year = 2020

),

CTE\_2021 AS

(

SELECT

count(Distinct p.product\_code) AS unique\_products\_2021

FROM dim\_product p

JOIN fact\_sales\_monthly s

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

WHERE s.fiscal\_year = 2021

)

SELECT

c2020.unique\_products\_2020,

c2021.unique\_products\_2021,

ROUND(

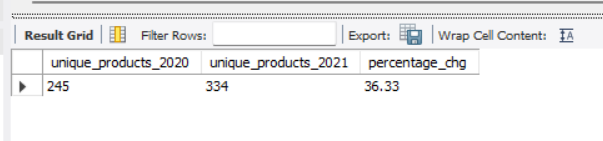
(c2021.unique\_products\_2021 - c2020.unique\_products\_2020) \* 100.0 / c2020.unique\_products\_2020, 2

) AS percentage\_chg

FROM CTE\_2020 c2020

CROSS JOIN CTE\_2021 c2021;

**Result:**



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

**Query:**

WITH CTE AS(

SELECT

segment,

count(distinct(product\_code)) AS product\_count

from dim\_product

GROUP BY segment

ORDER BY product\_count DESC

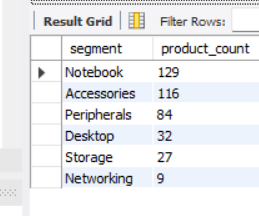
)

SELECT \*,

ROUND(product\_count \* 100.0 / SUM(product\_count) OVER(), 2) AS segment\_product\_share

FROM CTE

**Result:**

****

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

**Query:**

WITH CTE\_2020 AS

(

SELECT p.segment,

count(DISTINCT p.product\_code) AS unique\_products\_2020

FROM dim\_product p

JOIN fact\_sales\_monthly s

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

WHERE s.fiscal\_year = 2020

GROUP BY p.segment

),

CTE\_2021 AS

(

SELECT p.segment,

count(DISTINCT p.product\_code) AS unique\_products\_2021

FROM dim\_product p

JOIN fact\_sales\_monthly s

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

WHERE s.fiscal\_year = 2021

GROUP BY p.segment

)

SELECT

c2020.segment,

c2020.unique\_products\_2020,

c2021.unique\_products\_2021,

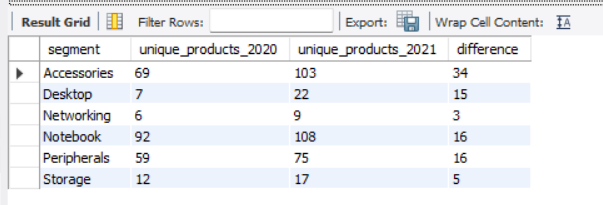
(c2021.unique\_products\_2021 - c2020.unique\_products\_2020) as difference

FROM CTE\_2020 c2020

JOIN CTE\_2021 c2021

ON c2020.segment = c2021.segment;

**Result:**

****

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

The final output should contain these fields,

product\_code

product

manufacturing\_cost

**Query:**

SELECT

p.product\_code,

p.product,

ROUND( m.manufacturing\_cost,2) as manufacturing\_cost

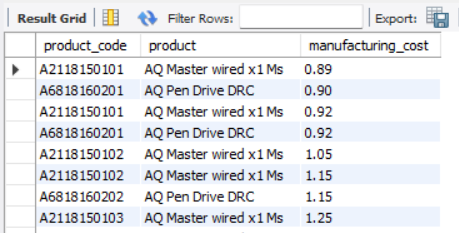
FROM

dim\_product p JOIN fact\_manufacturing\_cost m

on p.product\_code = m.product\_code

order by manufacturing\_cost ;

**Result:**

****

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

**Query:**

SELECT

c.customer\_code,

c.customer,

ROUND(AVG(pre.pre\_invoice\_discount\_pct),4) as avg\_pre\_invoice\_discount\_pct

FROM dim\_customer c

JOIN fact\_pre\_invoice\_deductions pre

ON c.customer\_code = pre.customer\_code

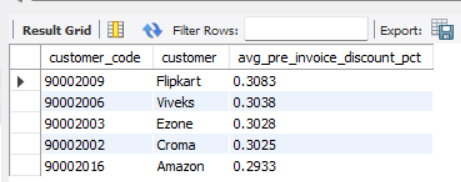
WHERE c.market ="INdia" AND pre.fiscal\_year = 2021

GROUP BY c.customer\_code,c.customer

order by avg\_pre\_invoice\_discount\_pct DESC

LIMIT 5;

**Result:**

****

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

**Query:**

SELECT

CONCAT(MONTHNAME(s.date), ' (', YEAR(s.date), ')') AS Month,

s.fiscal\_year,

sum(g.gross\_price) AS Gross\_sales\_Amount

FROM fact\_gross\_price g

JOIN fact\_sales\_monthly s

ON s.product\_code = g.product\_code

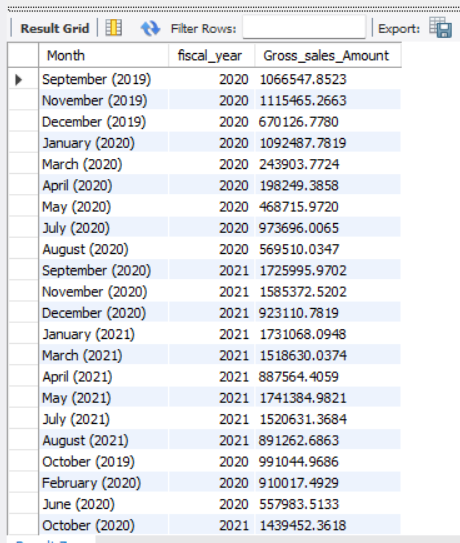
JOIN dim\_customer c

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

WHERE c.customer = "Atliq Exclusive"

GROUP BY CONCAT(MONTHNAME(s.date), ' (', YEAR(s.date), ')') ,s.fiscal\_year;

**Result:**

****

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

**Query:**

SELECT

CASE

WHEN MONTH(date) BETWEEN 9 AND 11 THEN 'Q1'

WHEN MONTH(date) IN (12, 1, 2) THEN 'Q2'

WHEN MONTH(date) BETWEEN 3 AND 5 THEN 'Q3'

ELSE 'Q4'

END AS Quarter,

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

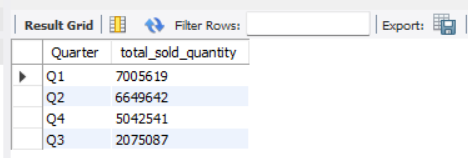
FROM fact\_sales\_monthly

WHERE fiscal\_year = 2020

group by Quarter

ORDER BY total\_sold\_quantity DESC ;

**Result:**

****

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

**Query:**

WITH CTE AS(

SELECT

c.channel,

CONCAT(ROUND(sum(g.gross\_price \* s.sold\_quantity)/1000000,2) , ' M') as gross\_sales\_mln

FROM dim\_customer c

JOIN fact\_sales\_monthly s

on c.customer\_code = s.customer\_code

join fact\_gross\_price g

on g.product\_code = s.product\_code

WHERE s.fiscal\_year = 2021

GROUP BY Channel

)

SELECT \*,

CONCAT(

ROUND(gross\_sales\_mln \* 100.0 / SUM(gross\_sales\_mln) OVER(), 2),

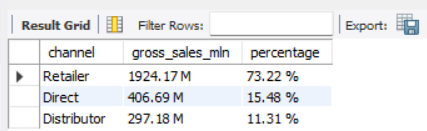
' %'

) AS percentage

FROM CTE

ORDER BY percentage DESC;

**Result:**

****

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

product

total\_sold\_quantity

rank\_order

**Query:**

WITH CTE AS (

SELECT

p.division,

p.product\_code,

p.product,

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

DENSE\_RANK() OVER(

PARTITION BY p.division

ORDER BY SUM(s.sold\_quantity) DESC

) AS sales\_rank

FROM dim\_product p

JOIN fact\_sales\_monthly s

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

WHERE s.fiscal\_year = 2021

GROUP BY

p.division,

p.product\_code,

p.product

)

SELECT \* from CTE WHERE sales\_rank <=3;

**Result:**

