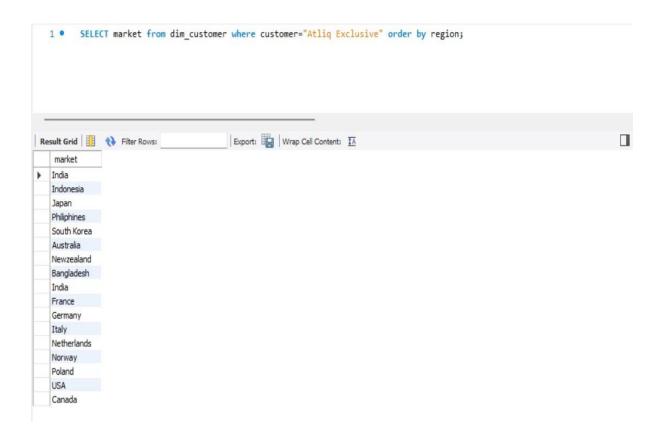
## SQL PROJECT: ADHOC ANALYSIS ON CONSUMER GOODS INSIGHTS OF ATLIQ HARDWARE

## Adhoc Requests:

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



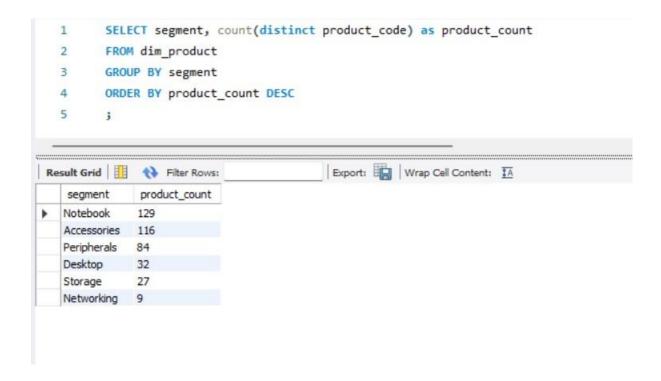
2. What is the percentage of unique product increase in 2021 vs. 2020? The  $\,$ 

final output contains these fields:

```
unique_products_2020
unique_products_2021
percentage_chg
```

```
1 • with tot_products as
                (SELECT count( distinct product_code) as total_products, fiscal_year as year
  2
  3
                FROM fact sales monthly
                GROUP BY fiscal_year)
  4
  5
  6
     SELECT a.total_products as unique_products_2020,b.total_products as unique_products_2021,
  7
                (b.total_products - a.total_products) as new_products_introduced,
  8
                ROUND((b.total_products - a.total_products) /a.total_products *100, 2) as pct_change
 9
       FROM tot_products as a
       LEFT JOIN tot_products as b
 10
 11
       ON a.year+1 = b.year
       LIMIT 1
 12
 13
Result Grid Filter Rows:
                                    Export: Wrap Cell Content: IA
  unique_products_2020 unique_products_2021 new_products_introduced pct_change
                                                           36.33
```

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 contains2 fields,segmentproduct\_count



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
```

92

```
with tot_products as
  2
                (SELECT count( distinct fs.product_code) as total_products, fiscal_year , segment
                FROM fact_sales_monthly as fs
  3
                LEFT JOIN dim_product
  4
  5
                ON fs.product_code = dim_product.product_code
                GROUP BY fiscal_year, segment)
  6
  7
       SELECT a.total_products as unique_products_2020,
               b.total_products as unique_products_2021,
  9
                b.total_products - a.total_products as difference,
 10
                a.segment,
           ROUND((b.total_products-a.total_products) /a.total_products *100 , 2) as pct_change
 11
 12
 13
        FROM tot_products as a
        LEFT JOIN tot_products as b
 14
        ON (a.fiscal_year+1 = b.fiscal_year and a.segment = b.segment)
 15
        WHERE b.total_products is not null
 16
 17
        ORDER BY a.fiscal_year,pct_change DESC
 18
 19
Result Grid Filter Rows:
                                    Export: Wrap Cell Content: TA
  unique_products_2020 unique_products_2021 difference segment pct_change
                     22
                                       15
                                                Desktop
                                                           214.29
                                               Networking 50.00
  69
                     103
                                       34
                                                Accessories 49.28
  12
                     17
                                       5
                                                Storage
                                                           41.67
  59
                                       16
                                                 Peripherals
                                                           27.12
```

Notebook 17.39

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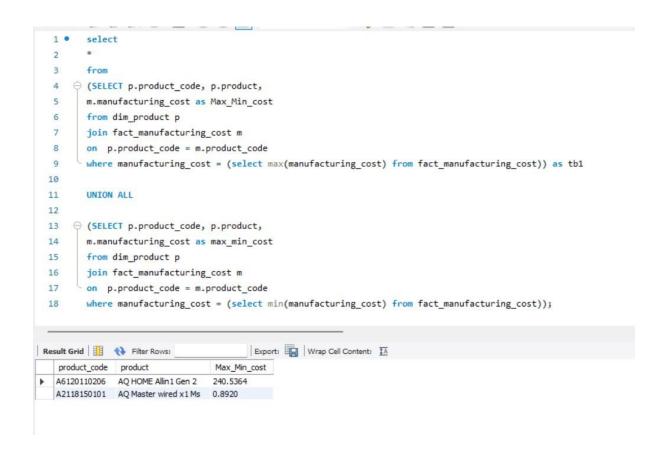
5. Get the products that have the highest and lowest manufacturing costs.

The final output should contain these fields,

product code

product

manufacturing\_cost

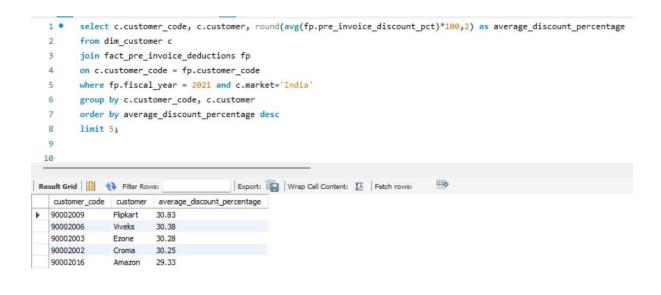


6. Generate a report which contains the top 5 customers who received an average high pre\_invoice\_discount\_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields,

 $customer\_code$ 

customer

average\_discount\_percentage



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

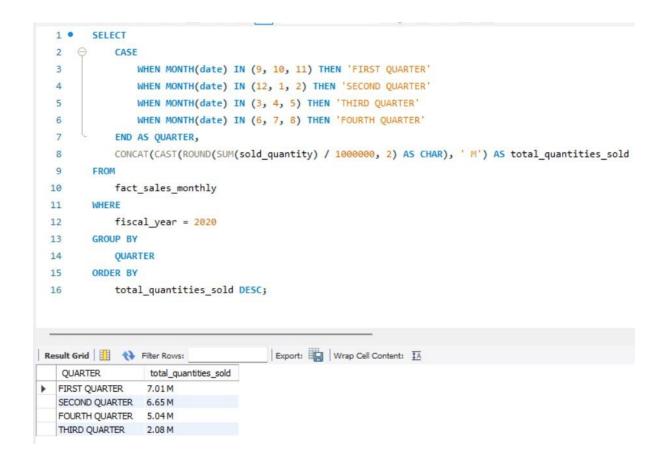
**Gross sales Amount** 

```
1
         SELECT
  2
                YEAR(date) as Year,
                MONTH(date) as month,
  3
                sum(sold_quantity * gross_price) AS gross_sales_amount
  4
  5
         FROM fact sales monthly as fs
  6
  7
         INNER JOIN fact gross price as fp
  8
         ON fs.product_code = fp.product_code and fs.fiscal_year = fp.fiscal_year
         INNER JOIN dim customer as dc
  9
         ON fs.customer code = dc.customer code
 10
        WHERE customer = "Atliq Exclusive"
 11
         group by month, YEAR(date)
 12
        ORDER BY Year, month
 13
                                       Export: Wrap Cell Content: IA
month gross_sales_amount
   Year
   2019
        9
               4496259.6724
   2019 10
               5135902.3467
   2019 11
               7522892.5608
   2019 12
               4830404.7285
   2020 1
               4740600.1605
   2020 2
            3996227.7661
   2020 3
               378770.9700
   2020 4 395035.3535
   2020 5
               783813.4238
             1695216.6008
   2020 6
   2020 7
               2551159.1584
   2020 8
               2786648.2601
   2020 9
               12353509.7938
   2020 10
              13218636.1966
```

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



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

```
1 • ⊖ WITH channels as (SELECT
                                channel,
  2
                                (SUM(sold_quantity * gross_price) / 1000000) as gross_sales_mln
  3
  4
                       FROM fact_sales_monthly as fm
  5
                        JOIN fact_gross_price as fp
  6
                        ON fm.product_code = fp.product_code
                        JOIN dim_customer as dc
  8
                        ON fm.customer_code = dc.customer_code
  9
                        WHERE fm.fiscal year = 2021
 10
                        GROUP BY channel
                        ORDER BY gross_sales_mln DESC )
 11
 12
 13 SELECT *,
                ROUND(gross_sales_mln * 100 / (SELECT SUM(gross_sales_mln) FROM channels), 2) as pct_contributions
 14
      FROM channels
Result Grid Filter Rows:
                                    Export: Wrap Cell Content: IA
  channel gross_sales_mln pct_contributions
▶ Retailer
            1924.17039791 73.22
  Direct 406.68687390 15.47
  Distributor 297.17587972
                        11.31
```

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

```
1 \bullet \ominus WITH top_product AS (
          SELECT
 2
 3
              fm.product_code,
 4
             dp.product,
 5
              dp.division,
              SUM(fm.sold_quantity) AS total_sold_quantity
 6
          FROM
 7
8
              fact_sales_monthly AS fm
9
          JOIN
10
              dim_product AS dp
11
12
              fm.product_code = dp.product_code
13
14
              fm.fiscal_year = 2021
          GROUP BY
15
16
              fm.product_code, dp.product, dp.division
17
     ),
18 ⊖ ranked_product AS (
          SELECT
19
20
              RANK() OVER (PARTITION BY division ORDER BY total_sold_quantity DESC) AS rank_order
21
22
          FROM
23
              top_product
     )
24
25
      SELECT *
26
27
          ranked_product
      WHERE
28
29
         rank_order IN (1, 2, 3);
```

	product_code	product	division	total_sold_quantity	rank_order
•	A6720160103	AQ Pen Drive 2 IN 1	N & S	701373	1
	A6818160202	AQ Pen Drive DRC	N & S	688003	2
	A6819160203	AQ Pen Drive DRC	N & S	676245	3
	A2319150302	AQ Gamers Ms	P&A	428498	1
	A2520150501	AQ Maxima Ms	P&A	419865	2
	A2520150504	AQ Maxima Ms	P&A	419471	3
	A4218110202	AQ Digit	PC	17434	1
	A4319110306	AQ Velocity	PC	17280	2
	A4218110208	AQ Digit	PC	17275	3