

Consumer Goods Ad_Hoc Insights

PRESENTED BY NASIR ABDULRAHEEM

SQL PROJECT CHALLENGE



ABOUT THE COMPANY

Atliq Hardwares is a leading computer hardware producer in India and well established in other countries.



Atliq's markets visualized on a map

PROBLEM

The management noticed that they do not get enough insights to make quick and smart data-informed decisions. 10 ad-hoc requests have been provided for which the company needs insights.

APPROACH

- . Run a SQL query to answer each of the requests
- . Convert the query results into visualizations
- . Create a presentation too show the insights to the top-level management

TOOLS USED

- . MySQL
- . Power BI

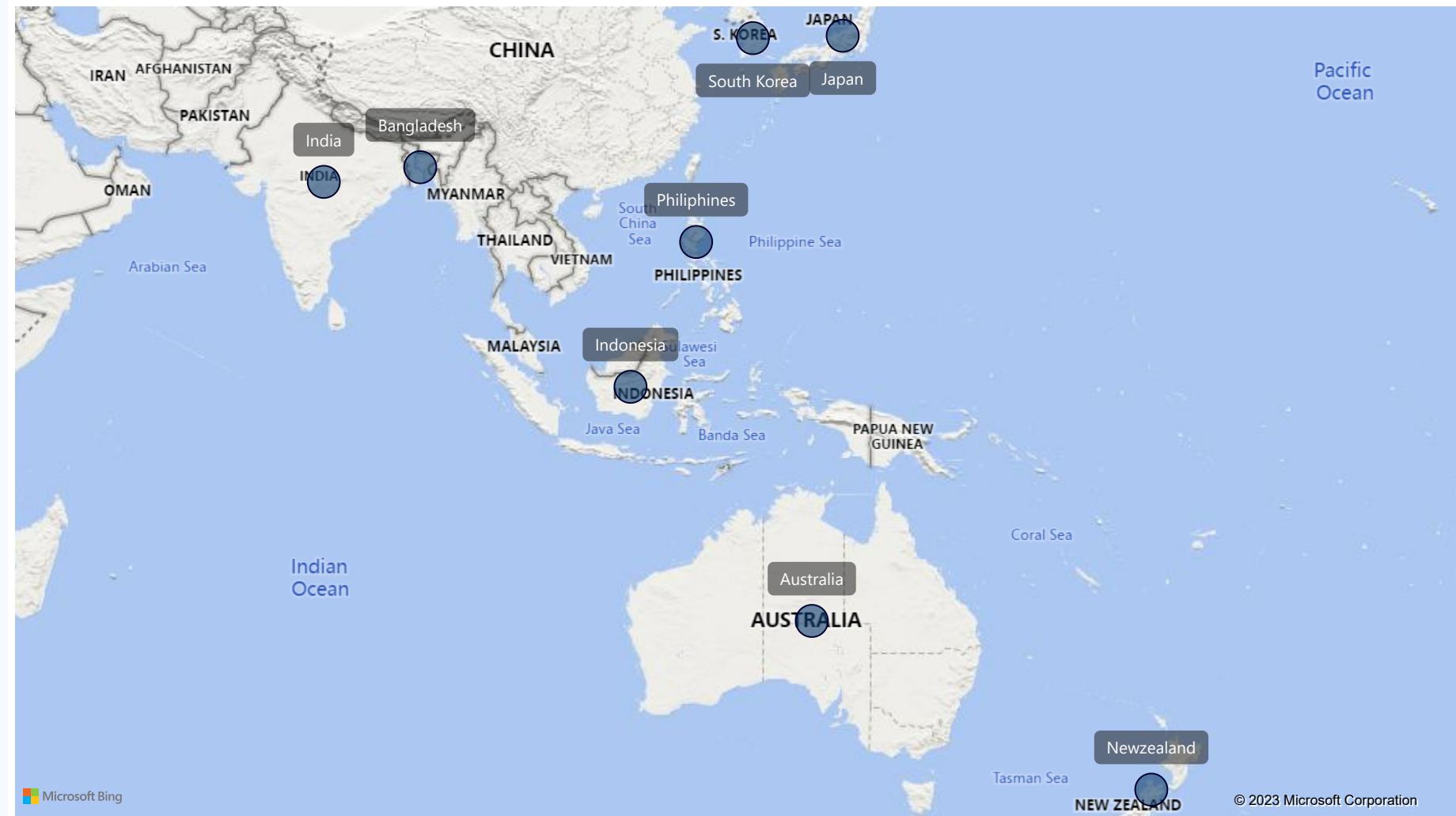




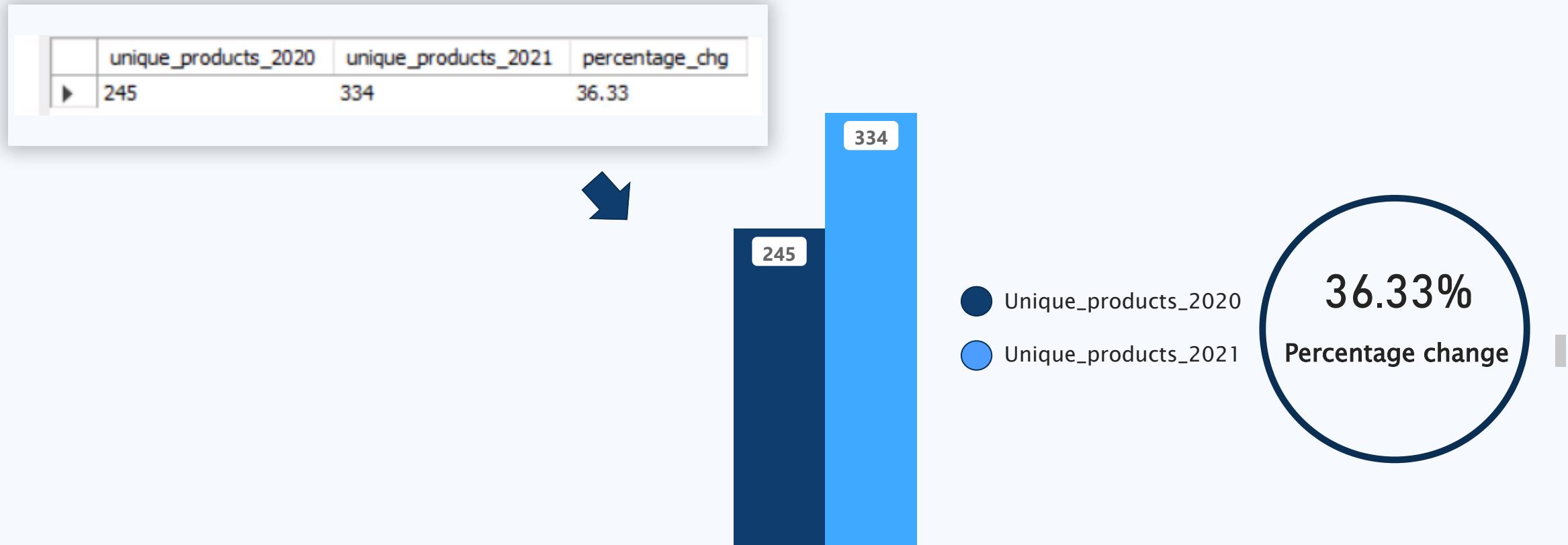
**Ad-hoc requests,
SQL query results,
visualizations and
insights.**

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

| market |
|-------------|
| Australia |
| Bangladesh |
| India |
| Indonesia |
| Japan |
| Newzealand |
| Philippines |
| South Korea |



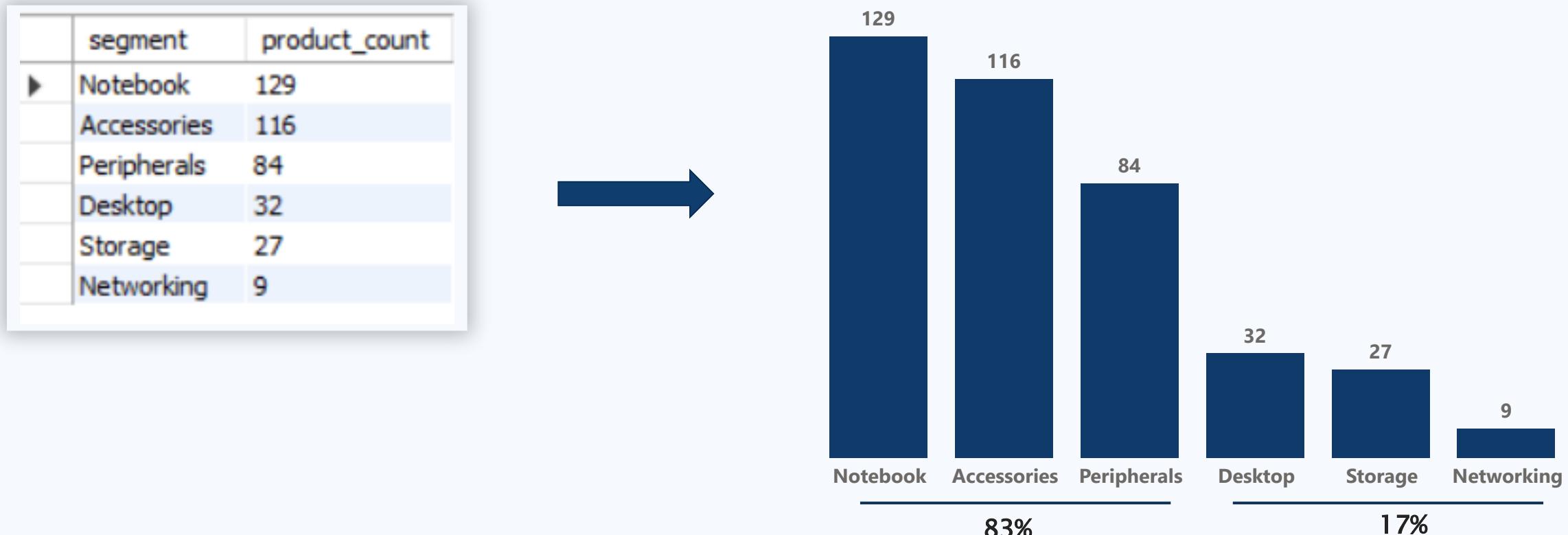
2. What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields; unique_products_2020, unique_products_2021, percentage_chg.



Insights:

- Atliq Hardwares increased the amount of unique products produced by 36.33%, from having 245 unique products in the fiscal year 2020 to having 334 unique products in fiscal year 2021.
- Increase in unique products indicates that Atliq Hardwares invests in research and development, and product diversification which enables the company to potentially stay ahead of competitors and address emerging trends

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.

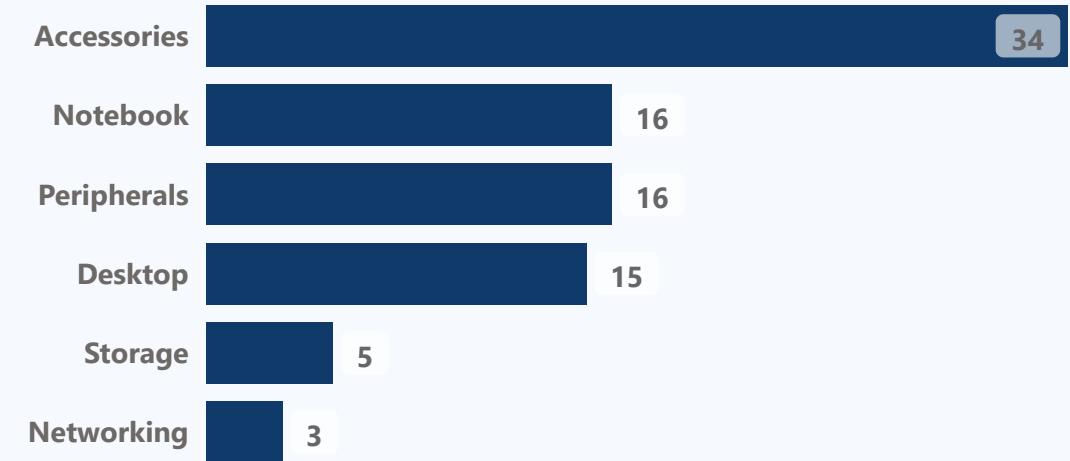


Insights:

There are more products manufactured in the notebook, accessories and peripherals segments, accounting for 83% of the total products. However, products in the other 3 segments; desktop, storage and networking, are much less diverse when compared to the top three.

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

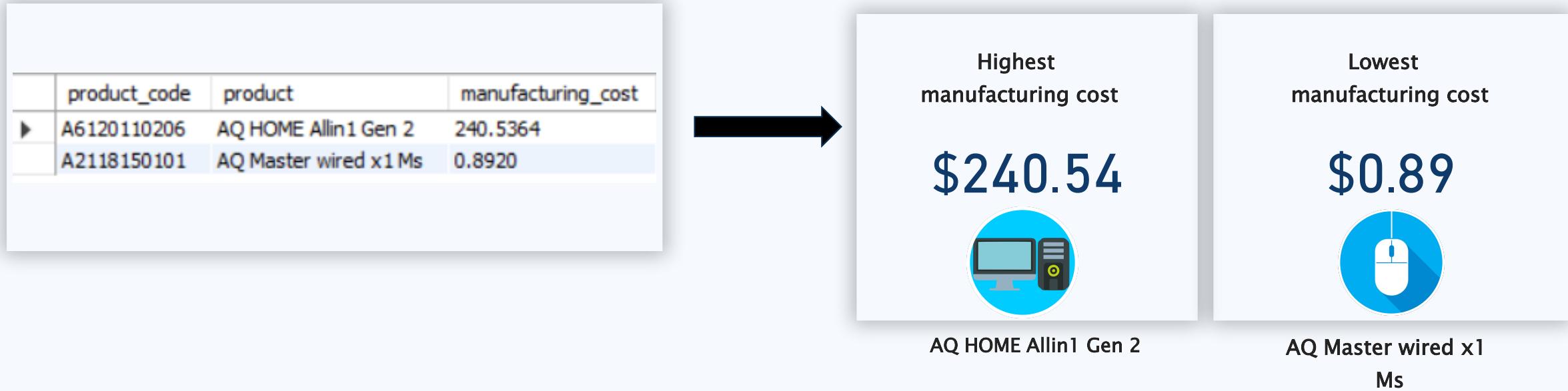
| segment | product_count_2020 | product_count_2021 | difference |
|-------------|--------------------|--------------------|------------|
| Accessories | 69 | 103 | 34 |
| Notebook | 92 | 108 | 16 |
| Peripherals | 59 | 75 | 16 |
| Desktop | 7 | 22 | 15 |
| Storage | 12 | 17 | 5 |
| Networking | 6 | 9 | 3 |



Insights

- The same segments that have the most product counts also have the most increase in unique products in the fiscal years 2020 and 2021.
- The desktop segment experienced a significant increase in unique products in 2021 with approximately 214% increase.
- Storage and networking segments experience slower growth as compared to other segments
- Result indicates that Atliq Hardwares are competitive by introducing new in-demand products across all segments

5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields; product_code, product, manufacturing_cost.

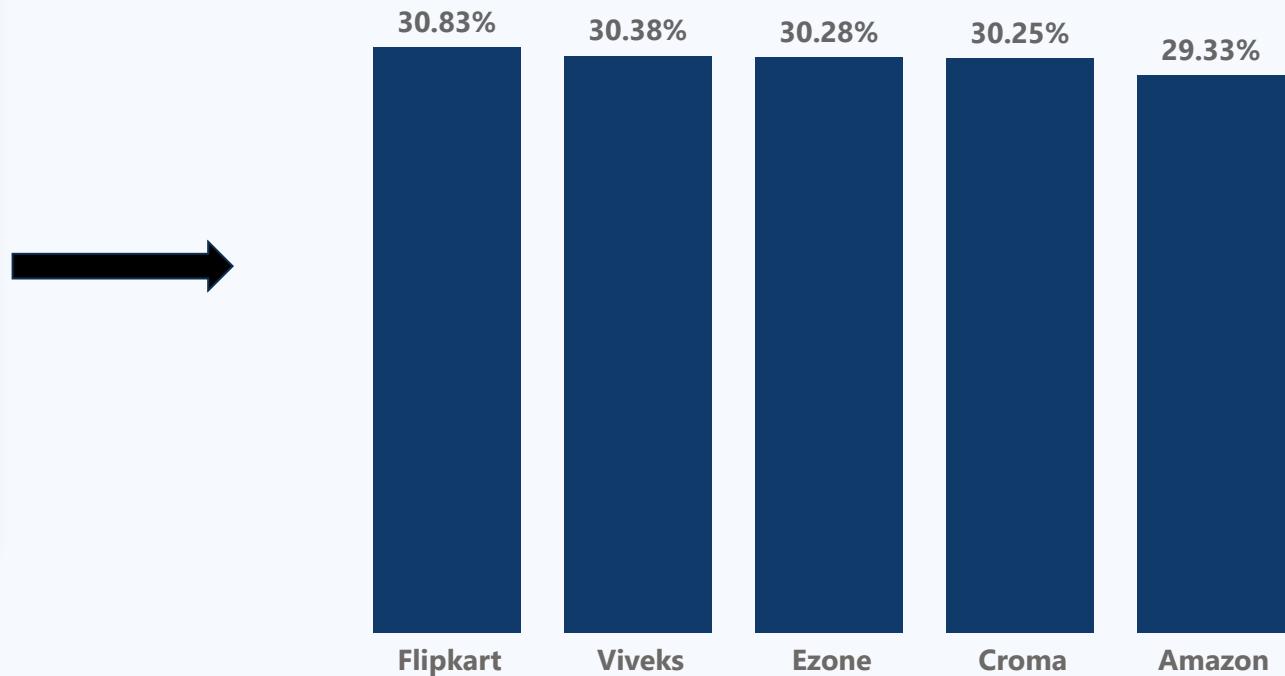


Insights:

- The product with the highest manufacturing cost is a personal desktop, AQ HOME Allin1 Gen 2 (Plus 3)
- AQ Master wired x1 Ms (Standard 1) which is a Mouse has the lowest 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.

| | customer_code | customer | average_discount_percentage |
|---|---------------|----------|-----------------------------|
| ▶ | 90002009 | Flipkart | 30.83 |
| | 90002006 | Viveks | 30.38 |
| | 90002003 | Ezone | 30.28 |
| | 90002002 | Croma | 30.25 |
| | 90002016 | Amazon | 29.33 |



Insights:

In the fiscal year 2021, Flipkart received the highest average pre-invoice discount percentage valued at 30.83%, in the Indian market. However this percentage is only slightly higher than the amount received by the other top customers in the same market.

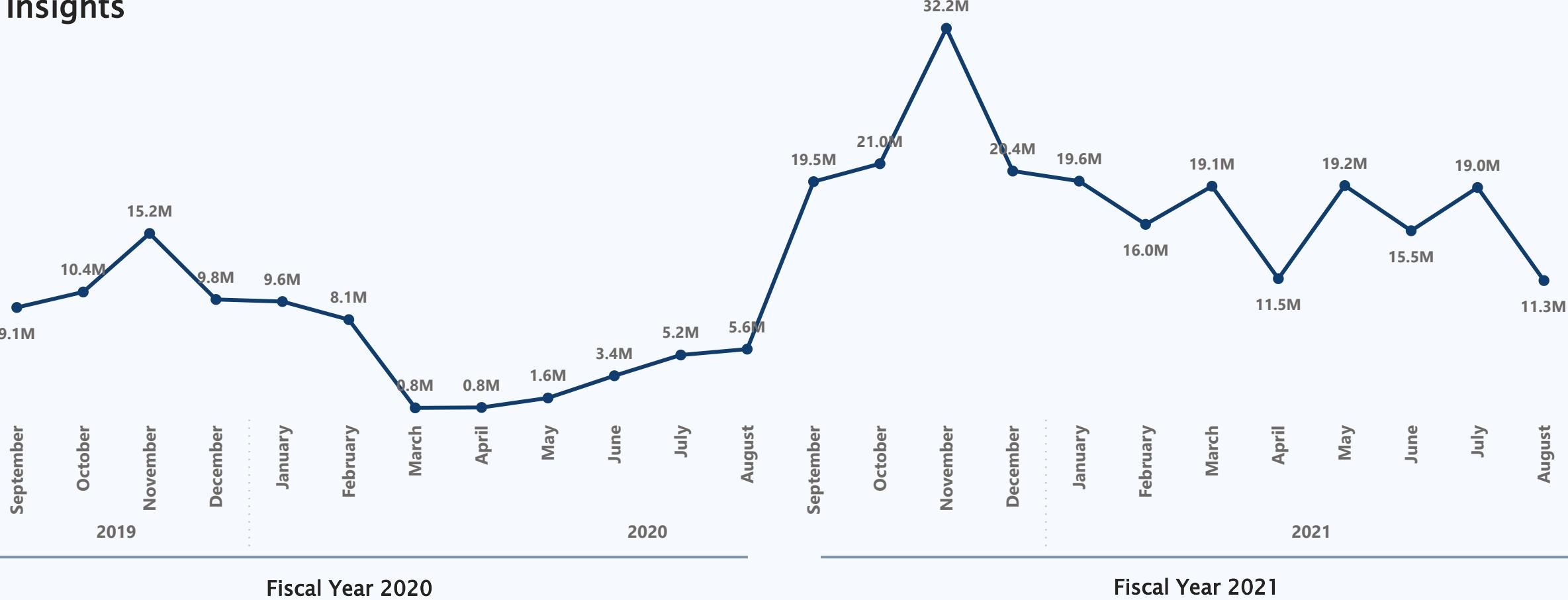
7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month . This analysis helps to get an idea of low and high-performing months and take strategic decisions. The final report contains these columns: Month, Year, Gross Sales Amount.

| | month | fiscal_year | gross_sales_amount |
|---|------------------|-------------|--------------------|
| ▶ | September (2020) | 2021 | 19530271.3028 |
| | October (2020) | 2021 | 21016218.2095 |
| | November (2020) | 2021 | 32247289.7946 |
| | December (2020) | 2021 | 20409063.1769 |
| | January (2021) | 2021 | 19570701.7102 |
| | February (2021) | 2021 | 15986603.8883 |
| | March (2021) | 2021 | 19149624.9239 |
| | April (2021) | 2021 | 11483530.3032 |
| | May (2021) | 2021 | 19204309.4095 |
| | June (2021) | 2021 | 15457579.6626 |
| | July (2021) | 2021 | 19044968.8164 |
| | August (2021) | 2021 | 11324548.3409 |
| | September (2019) | 2020 | 9092670.3392 |
| | October (2019) | 2020 | 10378637.5961 |
| | November (2019) | 2020 | 15231894.9669 |
| | December (2019) | 2020 | 9755795.0577 |
| | January (2020) | 2020 | 9584951.9393 |
| | February (2020) | 2020 | 8083995.5479 |
| | March (2020) | 2020 | 766976.4531 |
| | April (2020) | 2020 | 800071.9543 |
| | May (2020) | 2020 | 1586964.4768 |
| | June (2020) | 2020 | 3429736.5712 |
| | July (2020) | 2020 | 5151815.4020 |
| | August (2020) | 2020 | 5638281.8287 |

Fiscal Year 2021

Fiscal Year 2020

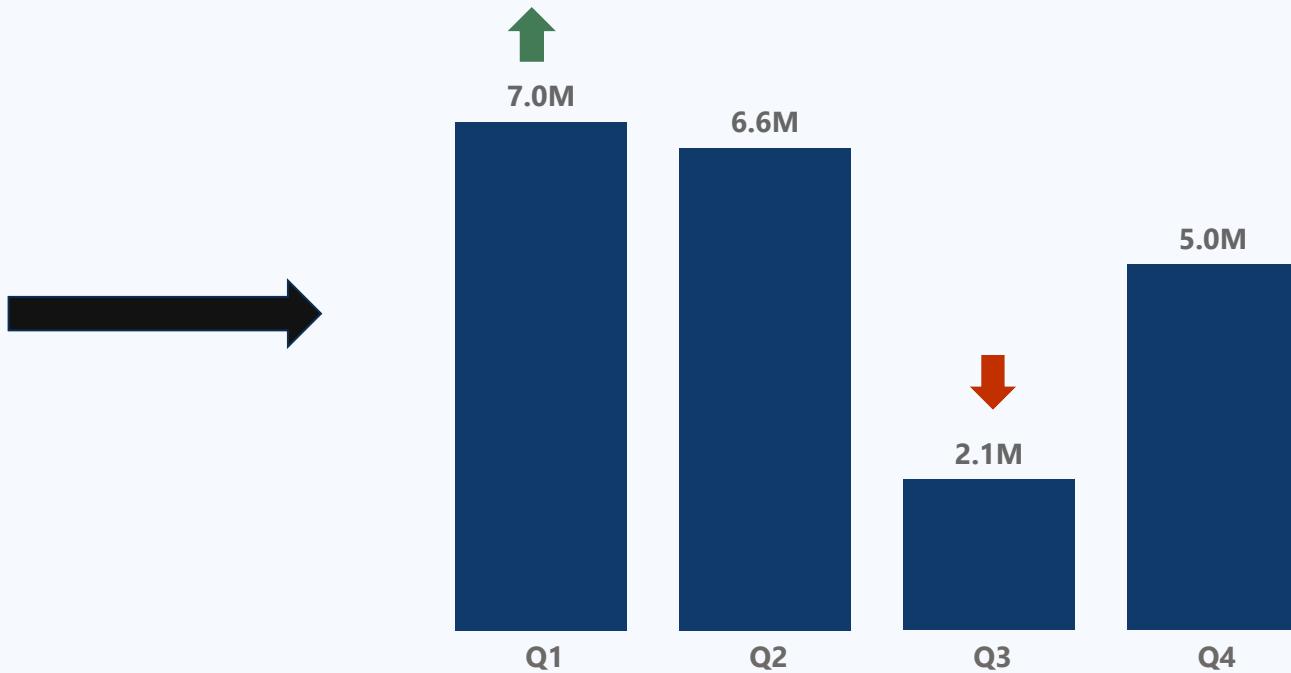
Insights



- In March 2020, Atliq Exclusive experienced a significant drop in sales. The main cause of this decline in sales is the COVID-19 pandemic that subsequently led to a shift towards cloud computing, impacting the demand for most computer hardware products.
- At the beginning of the fiscal year 2021 that is August 2020, Atliq Exclusive experienced rapid growth in sales peaked at 32.2M at the end of the first Quarter, November 2020.
- Altogether, the total sales is \$303.93M, having \$79.50M in the fiscal year 2020 and \$224.42M in the fiscal year 2021. The result indicates 182% increase in sales between 2020 and 2021.

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.

| | Quarter | total_sold_quantity |
|---|---------|---------------------|
| ▶ | Q1 | 7005619 |
| | Q2 | 6649642 |
| | Q4 | 5042541 |
| | Q3 | 2075087 |



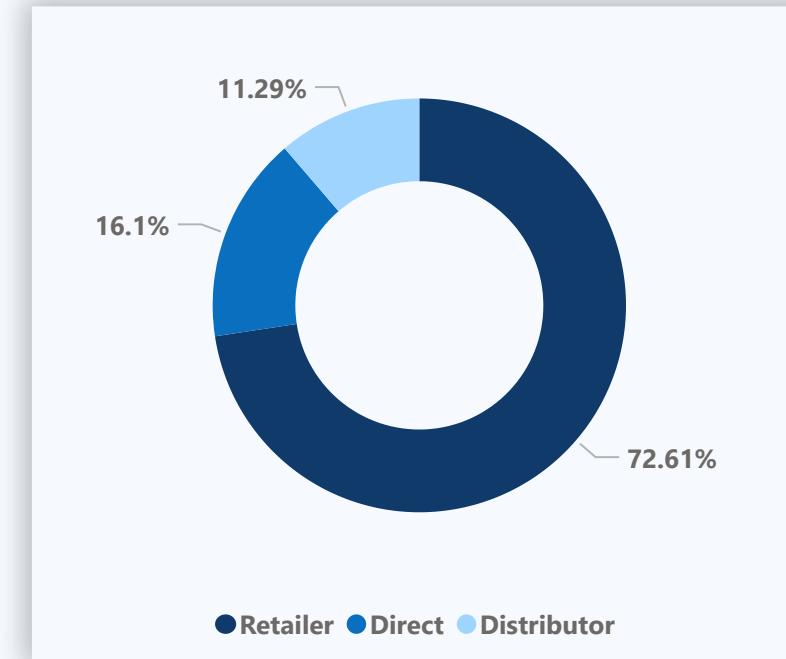
Insights:

The first quarter of 2020 got the maximum total sold quantity at approximately 7Million. This includes the months September 2019, October 2019 and November 2019, accounting for 33.72% of the total quantities sold in the fiscal year 2020.

The visuals also indicate the third quarter, Q3 to have got the least total sold quantity. This is reasonable considering the months that fall within this quarter; March 2020, April 2020 and May 2020, when the COVID-19 pandemic was prevalent. Only about 10% of the total quantity sold occurred in the Q3.

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

| | channel | gross_sales_mln | percentage |
|---|-------------|-----------------|------------|
| ▶ | Retailer | 1606.39322154 | 72.61 |
| | Direct | 356.12381290 | 16.10 |
| | Distributor | 249.85924599 | 11.29 |



Insights:

- . In the fiscal year 2021, the retailer channel helped to bring in more sales to the company, contributing to 72.61% of the total sales.
- . The distributor channel made the least sales for the company, contributing only 11.29% of the total sales

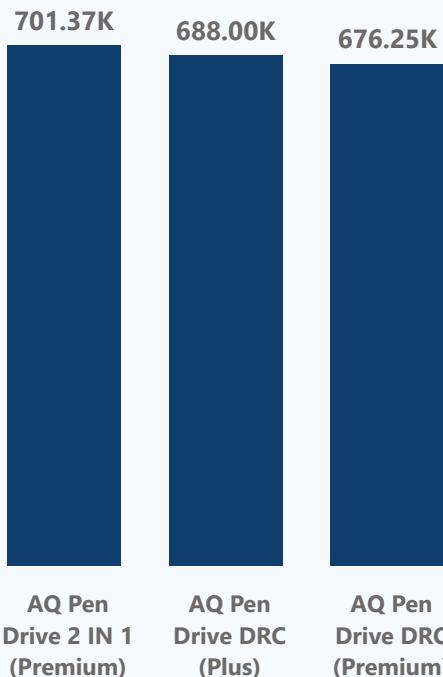
10. Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021? The final output contains these fields – division, product_code, product, total_sold_quantity, rank_order.

| | division | product_code | product | total_sold_quantity | rank_order |
|-------|-------------|--------------------------------|-------------------------------|---------------------|------------|
| ▶ | N & S | A6720160103 | AQ Pen Drive 2 IN 1 (Premium) | 701373 | 1 |
| | N & S | A6818160202 | AQ Pen Drive DRC (Plus) | 688003 | 2 |
| | N & S | A6819160203 | AQ Pen Drive DRC (Premium) | 676245 | 3 |
| P & A | A2319150302 | AQ Gamers Ms (Standard 2) | 428498 | 1 | |
| P & A | A2520150501 | AQ Maxima Ms (Standard 1) | 419865 | 2 | |
| P & A | A2520150504 | AQ Maxima Ms (Plus 2) | 419471 | 3 | |
| PC | A4218110202 | AQ Digit (Standard Blue) | 17434 | 1 | |
| PC | A4319110306 | AQ Velocity (Plus Red) | 17280 | 2 | |
| PC | A4218110208 | AQ Digit (Premium Misty Green) | 17275 | 3 | |

Insights:

In the fiscal year 2021, the top 3 products in each division have two similar products in them that only distinguished by their variants.

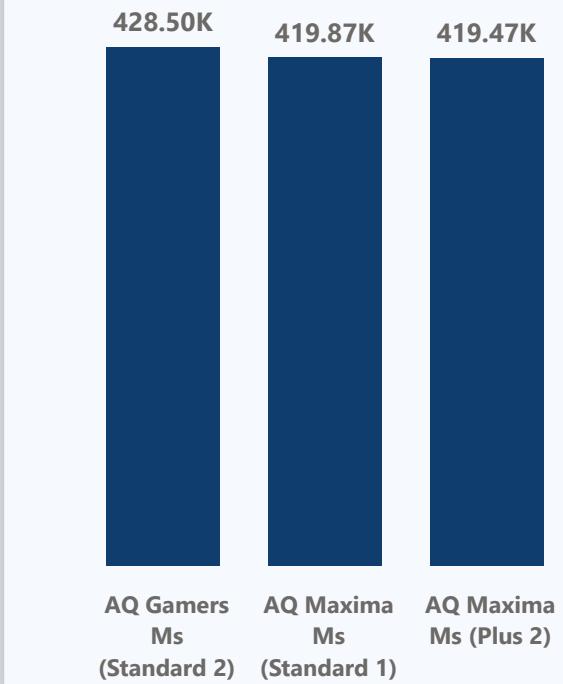
N & S



The top 3 selling products in N & S division

The top 3 selling products in P & A division

P & A



PC



The top 3 selling products in PC division

THANK YOU



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