



Ad_Hoc Insights Consumer Goods



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Agenda

1. Objective
2. Company Details & Market
3. Data , Requests & Tools

Objectives

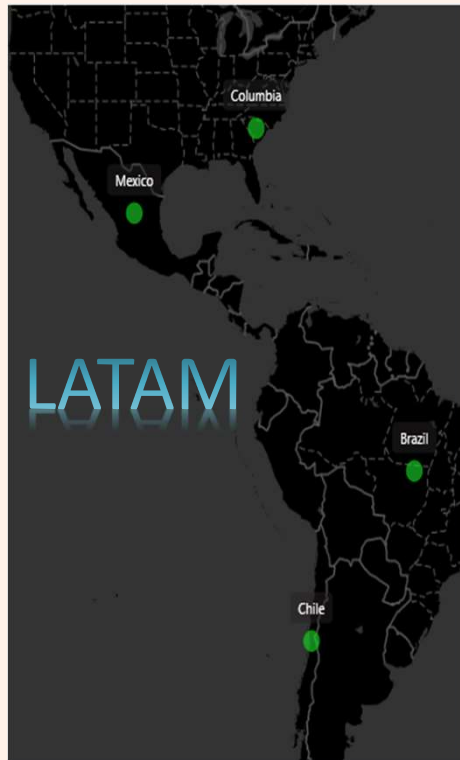
- **Atliq Hardware (fictitious corporation) is one of the major computer hardware manufacturers in India, with a strong presence in other nations.**
- **Nevertheless, the management did note that they do not have sufficient insights to make prompt, wise, and data-informed judgments.**
- **Plan to expand the data analytics team by adding junior data analysts.**
- **The company seeks insights for 10 ad hoc requests.**

Company Details

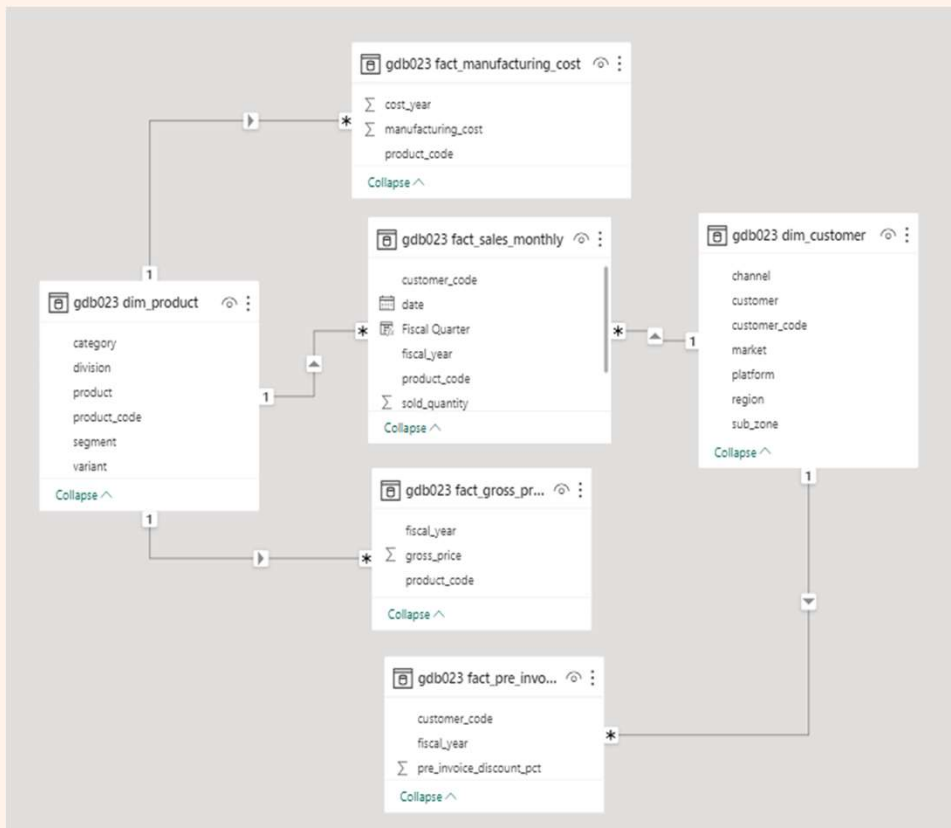
Atliq Hardware is a computer hardware and accessory manufacturer



Atliq Hardware's Market



Data , Request & Tools



Codebasics SQL Challenge

Requests:

1. Provide the list of markets in which customer "Atiq 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
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
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
5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, product_code, product, manufacturing_cost

Codebasics SQL Challenge

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 "Atiq 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
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_min, percentage
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



For Analysis & Visualisation

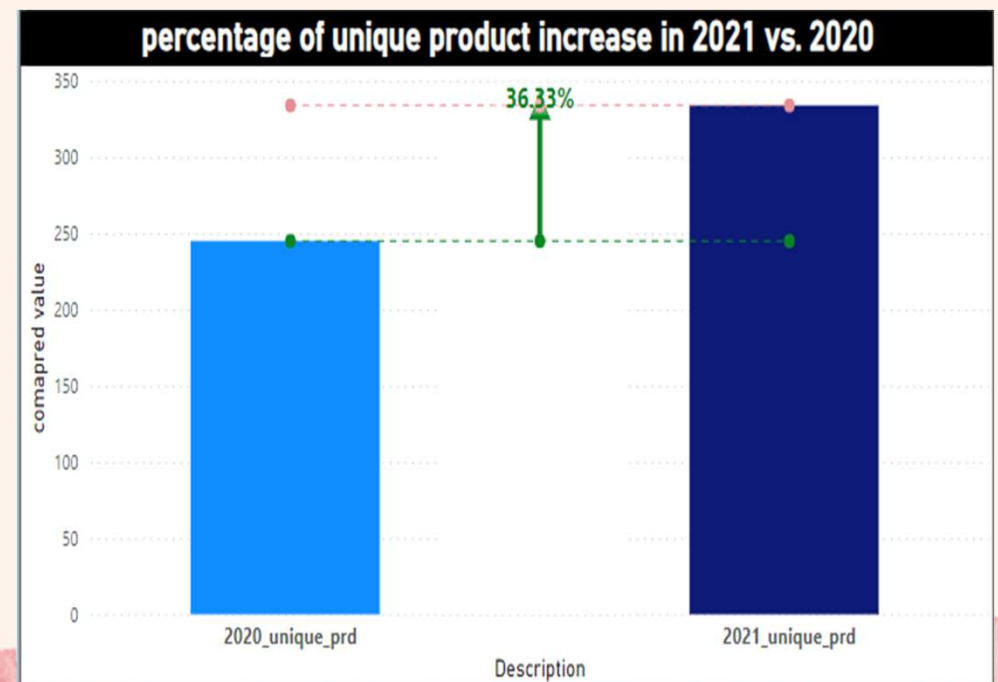
1 . Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

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



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

| unique_products_2020 | unique_products_2021 | per_diff |
|----------------------|----------------------|----------|
| 245 | 334 | 36.33 |



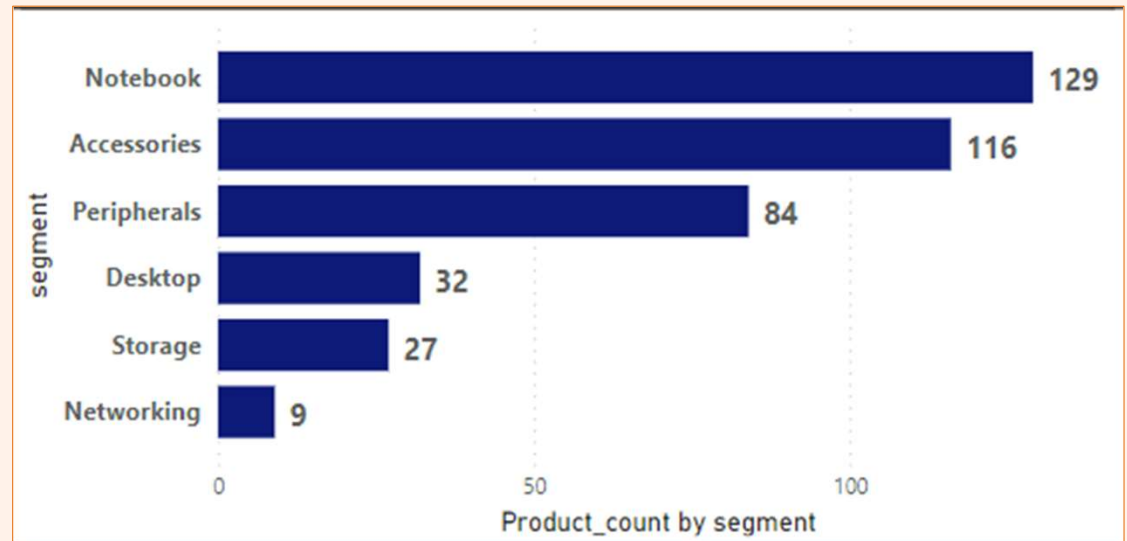
Insight :

- Demand & Production of new products **increased**

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

| segment | product_cnt |
|-------------|-------------|
| Notebook | 129 |
| Accessories | 116 |
| Peripherals | 84 |
| Desktop | 32 |
| Storage | 27 |
| Networking | 9 |



Insights:

- Segments: notebooks, accessories, and peripherals are showing significant manufacturing growth as compared to desktops, storage, and networking.
- Notebooks, accessories, and peripherals constitute 83% of the total manufactured product.

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 | prec_diff |
|-------------|--------------------|--------------------|-----------|
| Desktop | 7 | 22 | 214.29 |
| Networking | 6 | 9 | 50.00 |
| Accessories | 69 | 103 | 49.28 |
| Storage | 12 | 17 | 41.67 |
| Peripherals | 59 | 75 | 27.12 |
| Notebook | 92 | 108 | 17.39 |

| segment | Unique prd by segment 2020 | Unique prd by segment 2021 | % increment in segment |
|-------------|----------------------------|----------------------------|------------------------|
| Desktop | 7 | 22 | 214.29% |
| Networking | 6 | 9 | 50.00% |
| Accessories | 69 | 103 | 49.28% |
| Storage | 12 | 17 | 41.67% |
| Peripherals | 59 | 75 | 27.12% |
| Notebook | 92 | 108 | 17.39% |
| Total | 245 | 334 | 36.33% |

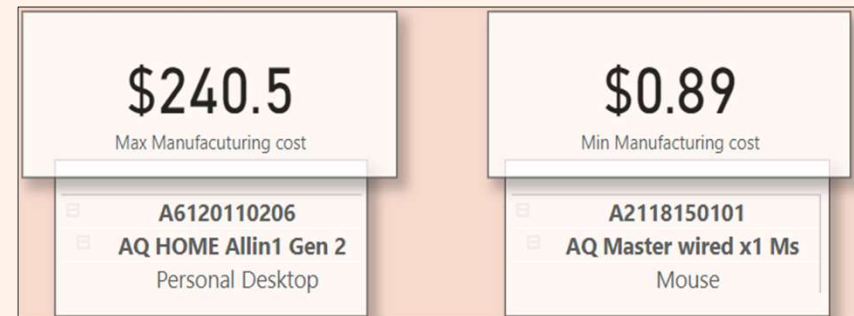
Insights:

- Desktop had the largest increase in production.
- Peripherals and Notebook are experiencing slower production growth than other 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

| product_code | product | manufacturing_cost |
|--------------|-----------------------|--------------------|
| A2118150101 | AQ Master wired x1 Ms | 0.8920 |
| A6120110206 | AQ HOME Allin1 Gen 2 | 240.5364 |

Product with highest and lowest
manufacturing costs



Insights:

- **Mouse:** AQ Master wired x1 Ms (Variant:Standard1) has the lowest manufacturing cost.
- **Personal Desktop:** AQ Home Allin1 Gen2 (Variant:Plus3) has the highest manufacturing cost.

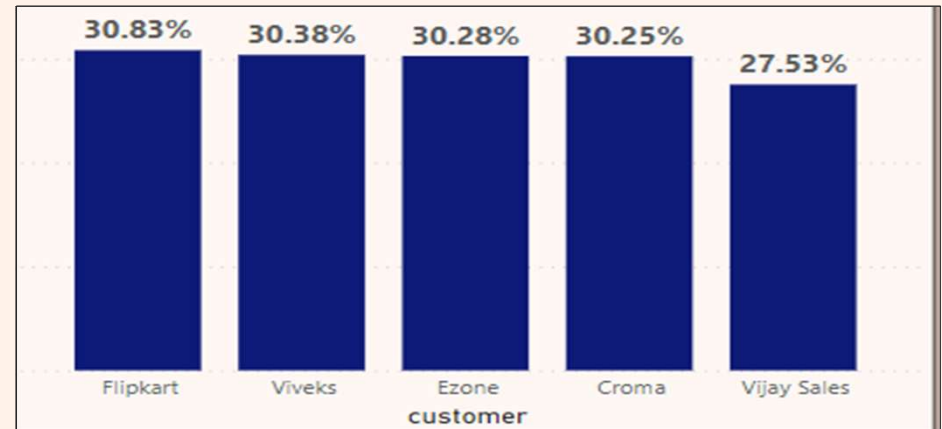
6 . Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields, customer_code customer average_discount_percentage

24.16%

Average pre invoice discount

| customer_code | customer | average_discount_percentage |
|---------------|----------|-----------------------------|
| 90002009 | Flipkart | 0.3083 |
| 90002006 | Viveks | 0.3038 |
| 90002003 | Ezone | 0.3028 |
| 90002002 | Croma | 0.3025 |
| 90002016 | Amazon | 0.2933 |

Top 5 customers with High average discount percentage



Insights:

- The **largest** average pre-invoice discount was given to **Flipkart**.
- The **least** average pre-invoice discount was given to **Amazon**.

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

Insights:

- The lowest Gross sales total for both fiscal years is in **March(2020)**.
- The **highest** Gross sales total for both fiscal years is in **November (2020)**.
- **73.8%** of the total Gross sales figure is in FY2021

| fiscal_year | Gross Sales | %GT Gross Sales |
|-------------|-----------------|-----------------|
| 2020 | 7,95,01,792.13 | 26.16% |
| 2021 | 22,44,24,709.54 | 73.84% |

Gross Sales for Atliq Exclusive

| Month | fiscal_year | gross_sales_amount |
|------------|-------------|--------------------|
| Sep (2019) | 2020 | 9092670.34 |
| Oct (2019) | 2020 | 10378637.60 |
| Nov (2019) | 2020 | 15231894.97 |
| Dec (2019) | 2020 | 9755795.06 |
| Jan (2020) | 2020 | 9584951.94 |
| Feb (2020) | 2020 | 8083995.55 |
| Mar (2020) | 2020 | 766976.45 |
| Apr (2020) | 2020 | 800071.95 |
| May (2020) | 2020 | 1586964.48 |
| Jun (2020) | 2020 | 3429736.57 |
| Jul (2020) | 2020 | 5151815.40 |
| Aug (2020) | 2020 | 5638281.83 |
| Sep (2020) | 2021 | 19530271.30 |
| Oct (2020) | 2021 | 21016218.21 |
| Nov (2020) | 2021 | 32247289.79 |
| Dec (2020) | 2021 | 20409063.18 |
| Jan (2021) | 2021 | 19570701.71 |
| Feb (2021) | 2021 | 15986603.89 |
| Mar (2021) | 2021 | 19149624.92 |
| Apr (2021) | 2021 | 11483530.30 |
| May (2021) | 2021 | 19204309.41 |
| Jun (2021) | 2021 | 15457579.66 |
| Jul (2021) | 2021 | 19044968.82 |
| Aug (2021) | 2021 | 11324548.34 |

FY 2020

FY 2021

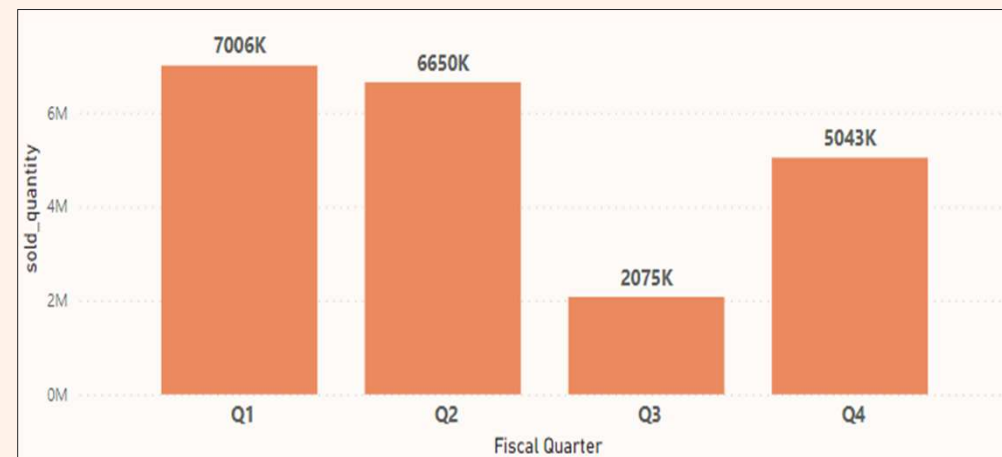


8 . In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the total_sold_quantity, Quarter ,total_sold_quantity

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

| Fiscal Quarter | Month | sold_quantity | %GT sold_quantity |
|----------------|-------|---------------|-------------------|
| Q1 | Sep | 1764002 | 8.49% |
| Q1 | Oct | 2190792 | 10.55% |
| Q1 | Nov | 3050825 | 14.69% |
| Q2 | Dec | 3184205 | 15.33% |
| Q2 | Jan | 1762652 | 8.49% |
| Q2 | Feb | 1702785 | 8.20% |
| Q3 | Mar | 238961 | 1.15% |
| Q3 | Apr | 819956 | 3.95% |
| Q3 | May | 1016170 | 4.89% |
| Q4 | Jun | 1559773 | 7.51% |
| Q4 | Jul | 1692575 | 8.15% |
| Q4 | Aug | 1790193 | 8.62% |

Quarter wise sold quantity for FY 2020



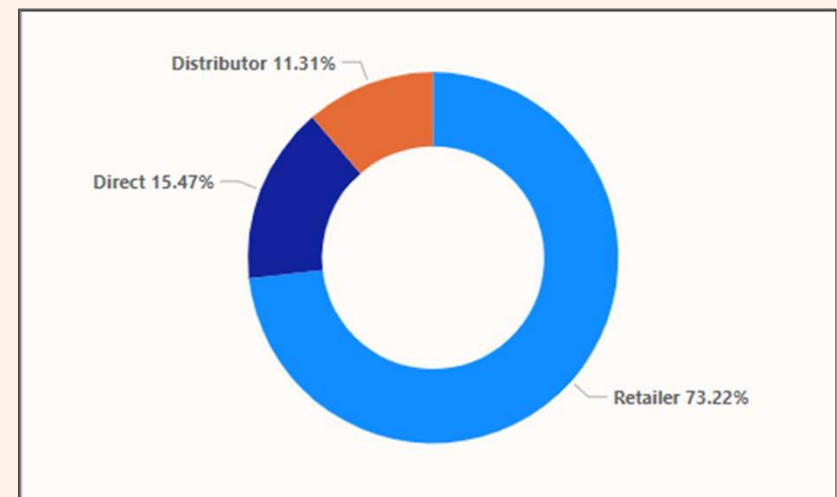
Insights:

- Quarter 1 of FY2020 has seen the most units sold overall, while Quarter3 had the fewest.
- The highest and lowest overall sold quantity is in December and March.
- Quarter1 accounts for approximately 34% of the total sold quantity for FY-2020.

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_amount_mln | pct_contribution |
|-------------|------------------------|------------------|
| Direct | 40.67 | 15.475058 |
| Distributor | 29.72 | 11.308550 |
| Retailer | 192.42 | 73.216392 |

Gross Sales by channel in FY 2021



Insights:

- Channel: "**Retailer**" helped bring maximum sales to the company with **73.22%** as the contribution percentage.
- Channel: "**Distributor**" makes the least contribution at a percentage of **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 product total_sold_quantity rank_order

| division | product_code | product | variant | sold_qty | product_ranking |
|----------|--------------|---------------------|---------------------|----------|-----------------|
| 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 |

Insight:

- Every division has a product with different variants that appears twice in the top three products by division list.

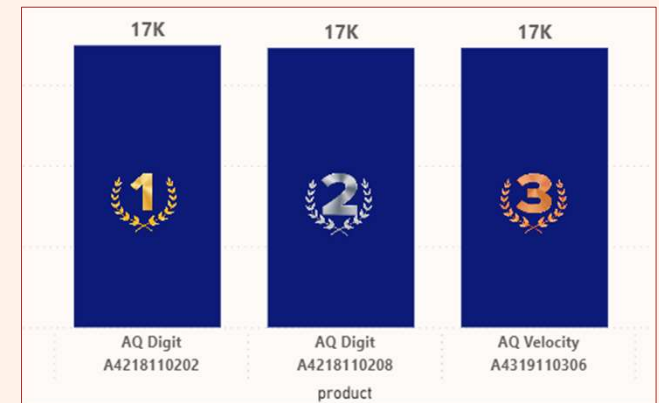
Top 3 products by N & S division



Top 3 products by P & A division



Top 3 products by PC division



THANK YOU !