



ATLIQ HARDWARE

CONSUMER GOODS

AD-HOC ANALYSIS

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Problem statement

AtliQ Hardware,(imaginarycompany) a top computer hardware producer in India with global reach, needs better data insights for faster decision-making.

To expand their analytics team, Tony Sharma, Director of Data Analytics, is hiring junior data analysts with strong technical and soft skills through a SQL challenge.

My task is to use SQL to fulfill 10 ad-hoc requests provided by Tony Sharma.

Business Model

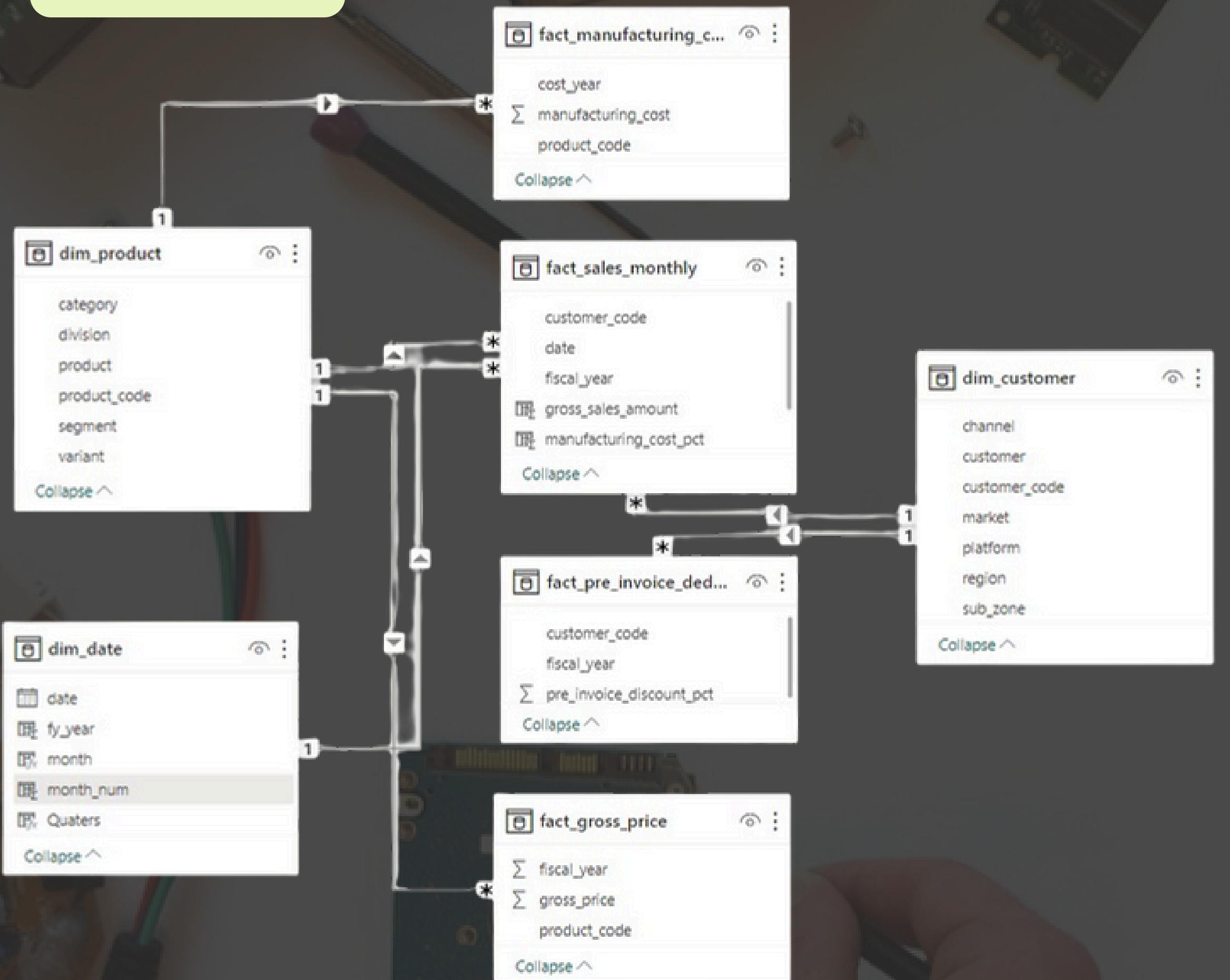
AtliQ Hardware is a hardware manufacturing company with a market presence in the APAC, LATAM, EU, and NA regions.

Its product catalog is divided into three divisions: PC, N&S, and P&A.

AtliQ Hardware sells its products through various channels, including retailers, direct stores, and distributors.

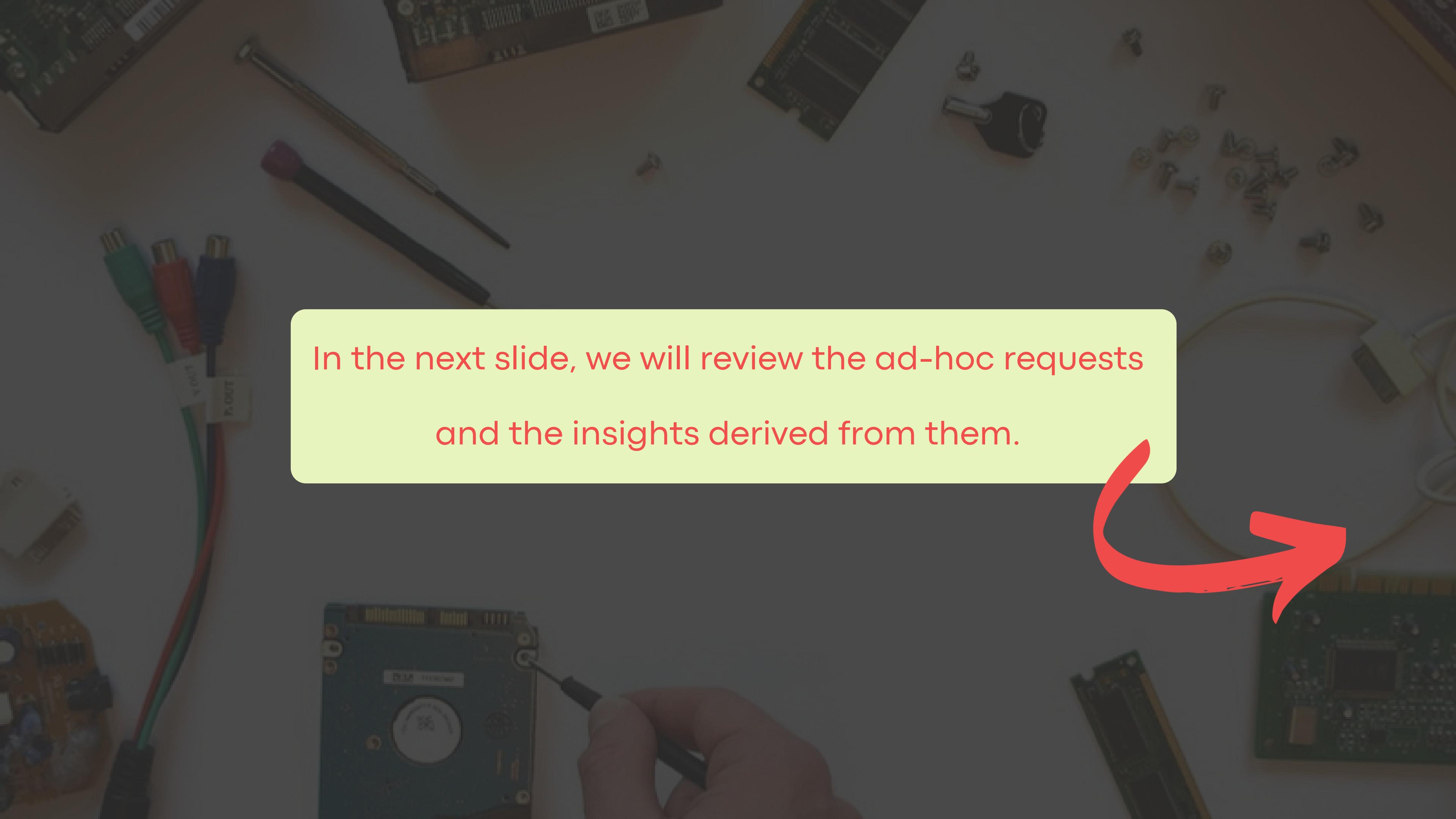
Sales are conducted via both brick-and-mortar locations and e-commerce platforms.

DataModel



Tools used





In the next slide, we will review the ad-hoc requests
and the insights derived from them.



REQUEST-1

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

OUTPUT

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

INSIGHTS

In Asia Pacific region , Atliq Hardware's Direct store ,Atliq Exclusive has it's market in **8 regions**:

India,
Bangladesh,
Japan,
South Korea ,
Philippines,
Indonesia,
Australia ,
New Zealand



REQUEST-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

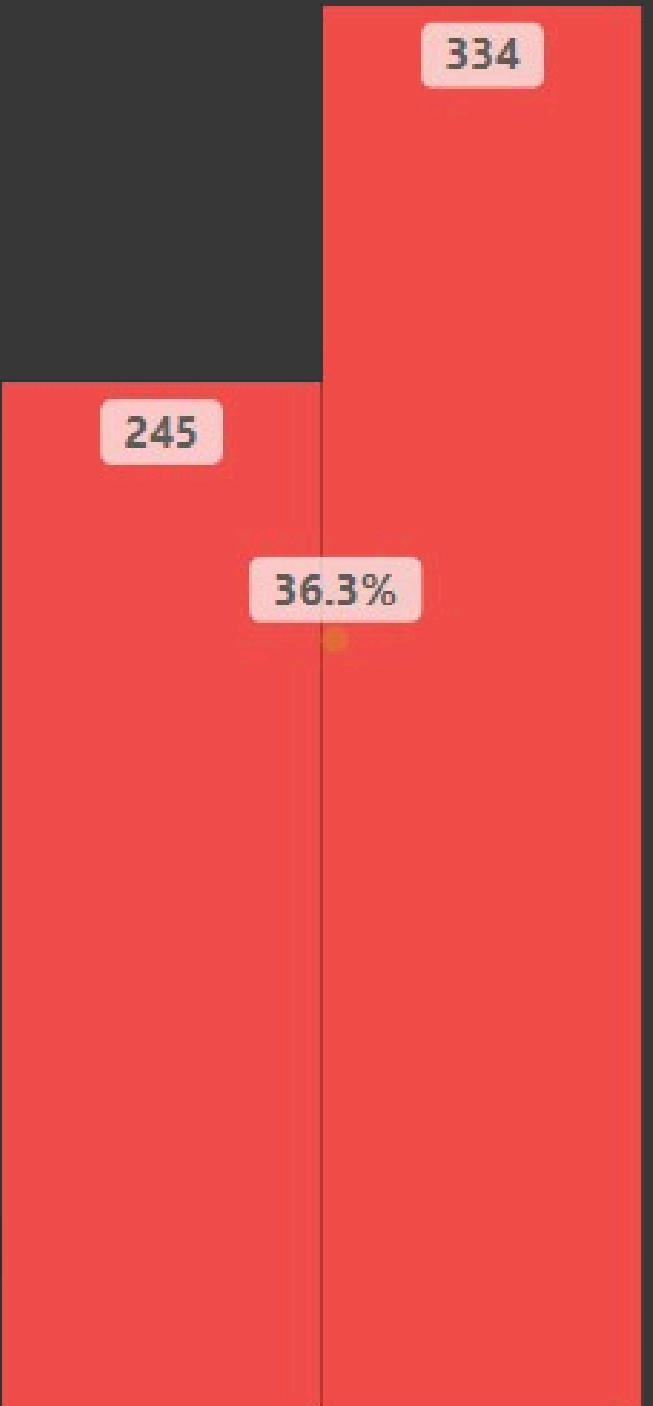
OUTPUT

| u20 | u21 | percentage_chg |
|-----|-----|----------------|
| 245 | 334 | 36.33 |

INSIGHTS

AtliQ Hardware increased its product line by 36.3% in 2021.

To evaluate whether this expansion is beneficial for the company, it's essential to examine other financial metrics such as revenue growth and profitability.



Additionally, assessing whether the launch of new products has led to an increase in market share will provide further insights into the success of this strategy.

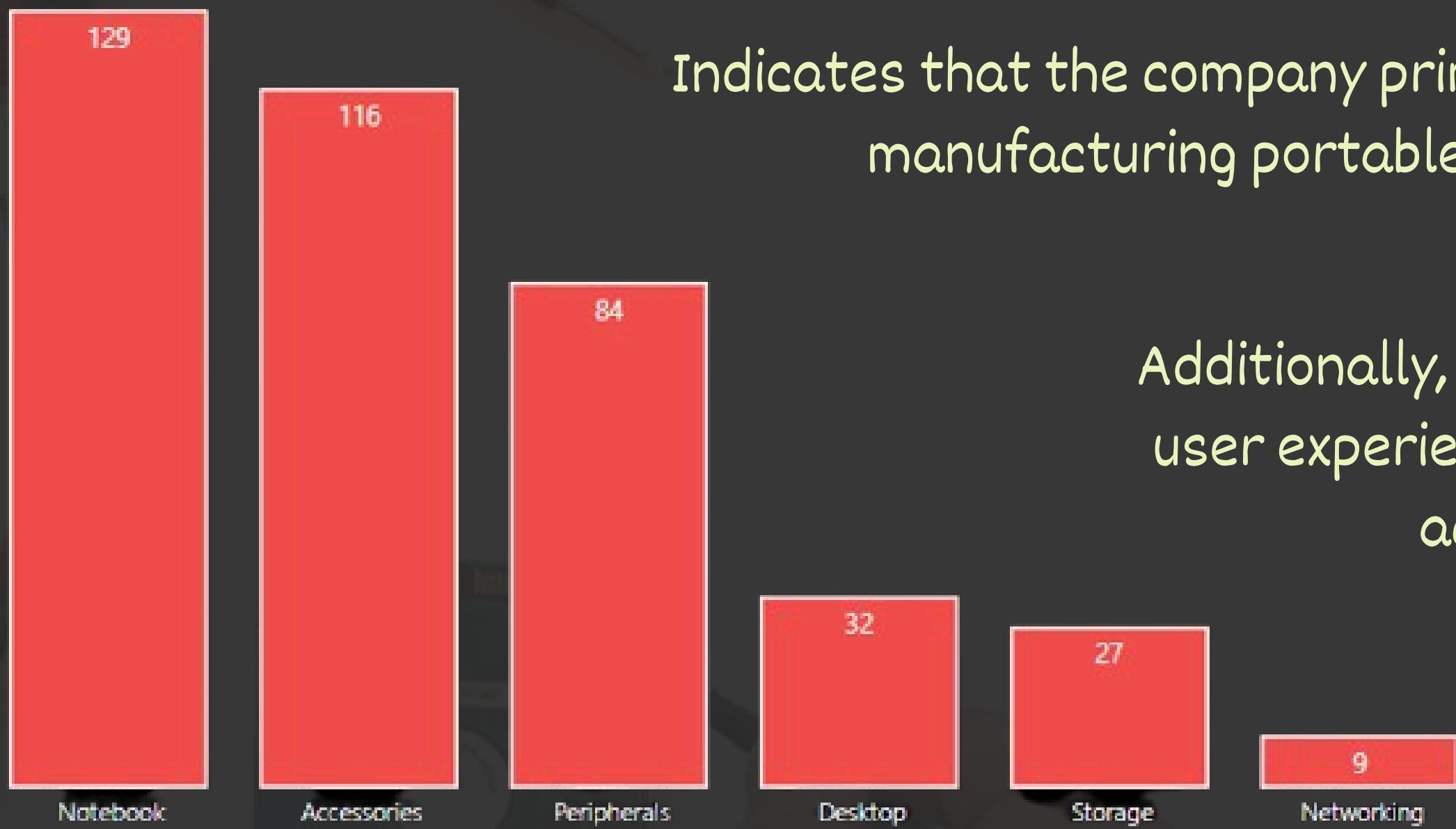
REQUEST-3

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

OUTPUT

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

AtliQ has the highest number of products in the Notebook and Accessories segments



Indicates that the company primarily focuses on manufacturing portable devices.

Additionally, they are keen on enhancing the user experience by equally emphasizing the accessories segment.

REQUEST-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*

OUTPUT

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

INSIGHTS

| segment | unique_products_20 | unique_products_21 | diff_unique_product |
|-------------|--------------------|--------------------|--|
| Accessories | 69 | 103 | 34  |
| Desktop | 7 | 22 | 15  |
| Networking | 6 | 9 | 3  |
| Notebook | 92 | 108 | 16  |
| Peripherals | 59 | 75 | 16  |
| Storage | 12 | 17 | 5  |
| Total | 245 | 334 | 89 |

In 2021, AtliQ Hardware expanded its product catalog by adding 34 new products in the accessories segment, followed by an increase in the notebook segment.

AtliQ Hardware may not have increased its network and storage segments due to lower market demand, strategic focus on more profitable segments, resource allocation, competitive landscape, an adequate existing product range,

REQUEST-5

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

The final output should contain these fields,

product_code

product

manufacturing_cost

OUTPUT

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

INSIGHTS

The product with *minimum manufacturing cost is AQ Master wired x1 Ms with cost 0.892

The product with maximum maufacturing cost is AQ HOME Allin1 Gen 2 with cost 240.5364

This analysis can identify areas for cost reduction.

For high-cost products, the business can explore lowering production costs by finding cheaper materials, improving efficiency, or outsourcing.

REQUEST-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

OUTPUT

| customer_code | customer | average_discount_percentage |
|---------------|----------|-----------------------------|
| 90002009 | Flipkart | 0.30830000 |
| 90002006 | Viveks | 0.30380000 |
| 90002003 | Ezone | 0.30280000 |
| 90002002 | Croma | 0.30250000 |
| 90002016 | Amazon | 0.29330000 |

INSIGHTS

These customers might be the most loyal or long-term clients, and high discounts could be part of a strategy to retain their business.



Ensure that the discounts are still resulting in profitable transactions.

REQUEST-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

OUTPUT

| m | fiscal_year | gross_sales_amount_in_millions |
|-----------|-------------|--------------------------------|
| September | 2020 | 4.50 |
| October | 2020 | 5.14 |
| November | 2020 | 7.52 |
| December | 2020 | 4.83 |
| January | 2020 | 4.74 |
| February | 2020 | 4.00 |
| March | 2020 | 0.38 |
| April | 2020 | 0.40 |
| May | 2020 | 0.78 |
| June | 2020 | 1.70 |
| July | 2020 | 2.55 |
| August | 2020 | 2.79 |
| September | 2021 | 12.35 |
| October | 2021 | 13.22 |
| November | 2021 | 20.46 |
| December | 2021 | 12.94 |
| January | 2021 | 12.40 |
| February | 2021 | 10.13 |
| March | 2021 | 12.14 |
| April | 2021 | 7.31 |
| May | 2021 | 12.15 |
| June | 2021 | 9.82 |
| July | 2021 | 12.09 |
| August | 2021 | 7.18 |

significant sales spikes in November of both 2020 and 2021, indicating a strong seasonal effect likely tied to festive seasons



Following the November peaks, sales drop in December and January both years. However, the decline is less steep in 2021 than in 2020, indicating improved post-peak sales retention.

REQUEST-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

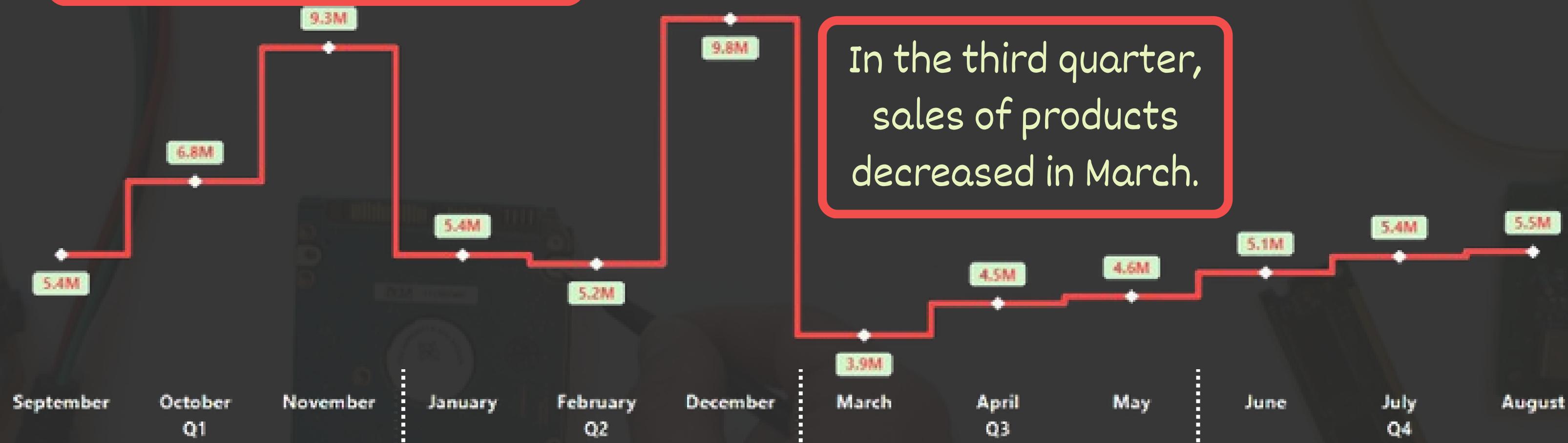
OUTPUT

| quarters | total_qty_in_millions |
|----------|-----------------------|
| Q1 | 7.01 |
| Q2 | 6.65 |
| Q3 | 2.08 |
| Q4 | 5.04 |

INSIGHTS

Studying sales across quarters helps a business identify seasonal trends and adjust inventory, optimize marketing strategies for peak periods,

sales increased in November and December due to the festive season.

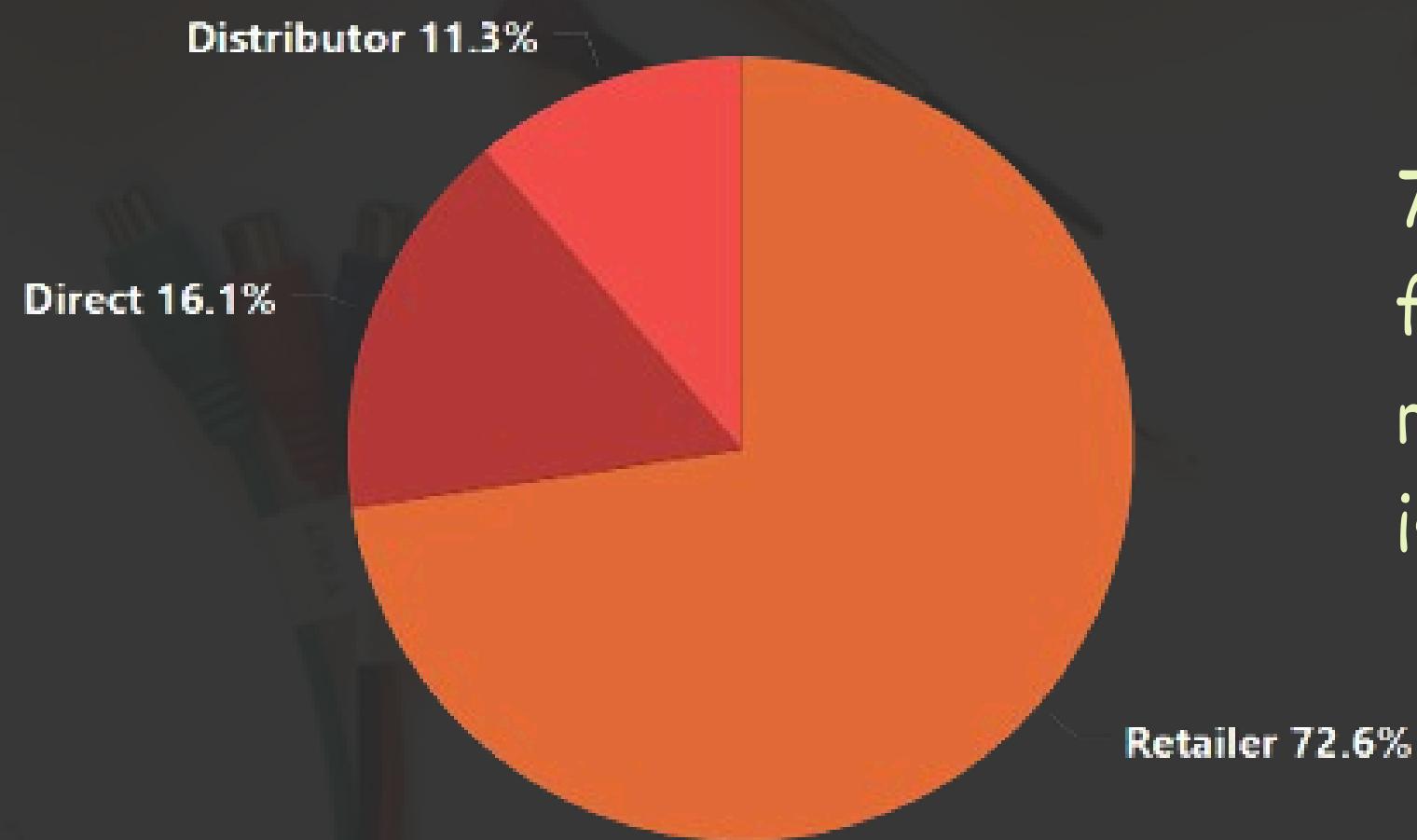


REQUEST-9

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

OUTPUT

| channel | total_sales_in_millions | percentage |
|-------------|-------------------------|------------|
| Distributor | 188.03 | 11.30 |
| Direct | 257.53 | 15.47 |
| Retailer | 1219.08 | 73.23 |



73% of sales are made through retailers, followed by 15% from direct stores, maintaining customer loyalty among retailers is crucial.

Offering pre-invoice discounts can be an effective strategy to ensure continued strong sales through this channel.

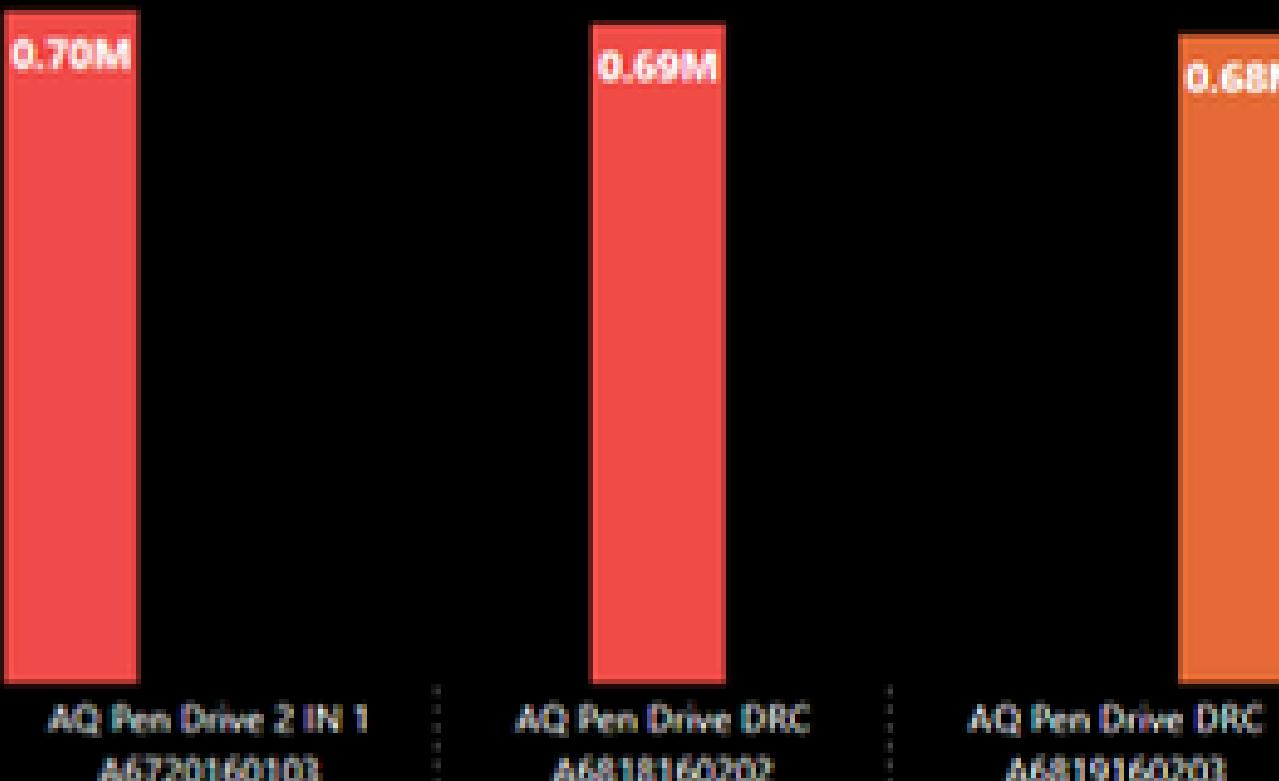
REQUEST-10

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

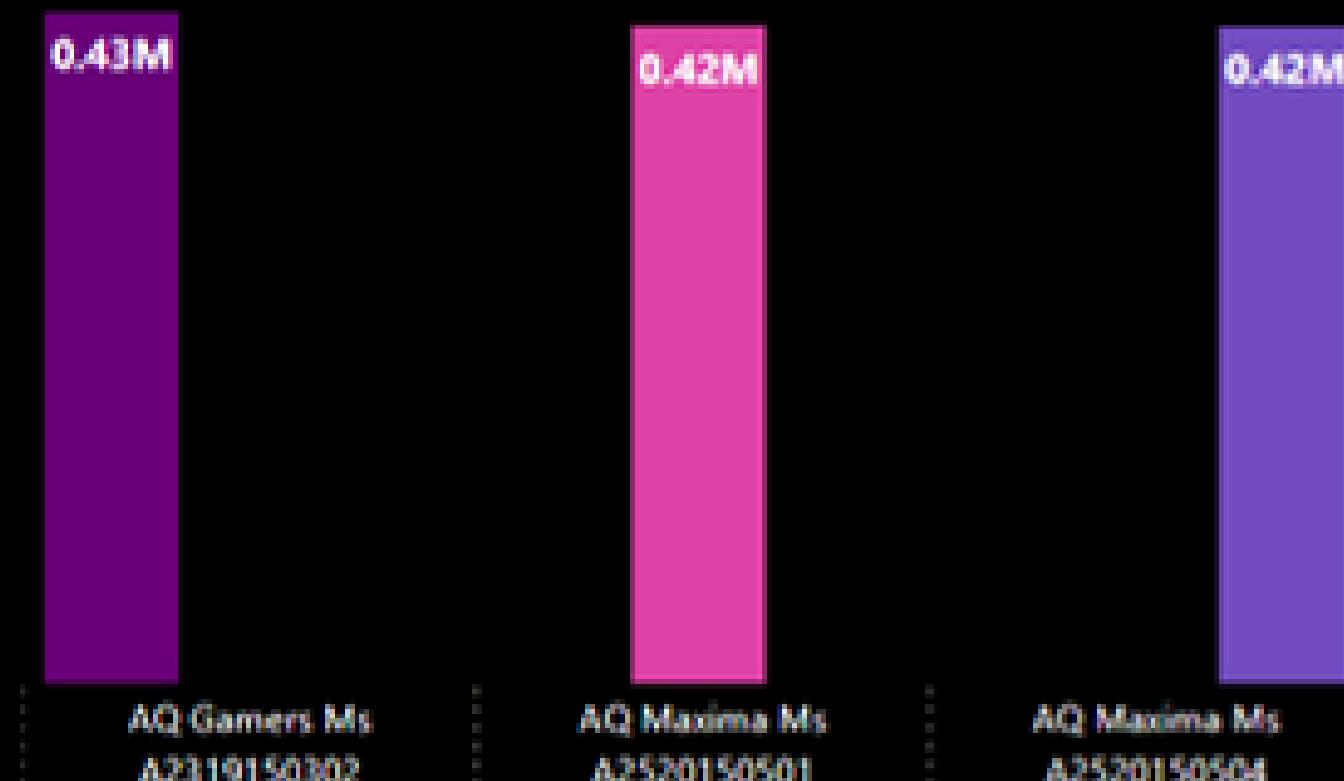
OUTPUT

| division | product_code | product | total_qty | rnk |
|----------|--------------|------------------|-----------|-----|
| N & S | A6818160202 | AQ Pen Drive DRC | 1331 | 1 |
| N & S | A6319160202 | AQ Neuer SSD | 944 | 2 |
| N & S | A6819160203 | AQ Pen Drive DRC | 940 | 3 |
| P & A | A2319150302 | AQ Gamers Ms | 1038 | 1 |
| P & A | A2721150704 | AQ Trigger Ms | 1034 | 2 |
| P & A | A2520150501 | AQ Maxima Ms | 1000 | 3 |
| PC | A4520110504 | AQ Gen X | 39 | 1 |
| PC | A4218110207 | AQ Digit | 38 | 2 |
| PC | A4218110205 | AQ Digit | 37 | 3 |

Division N&S



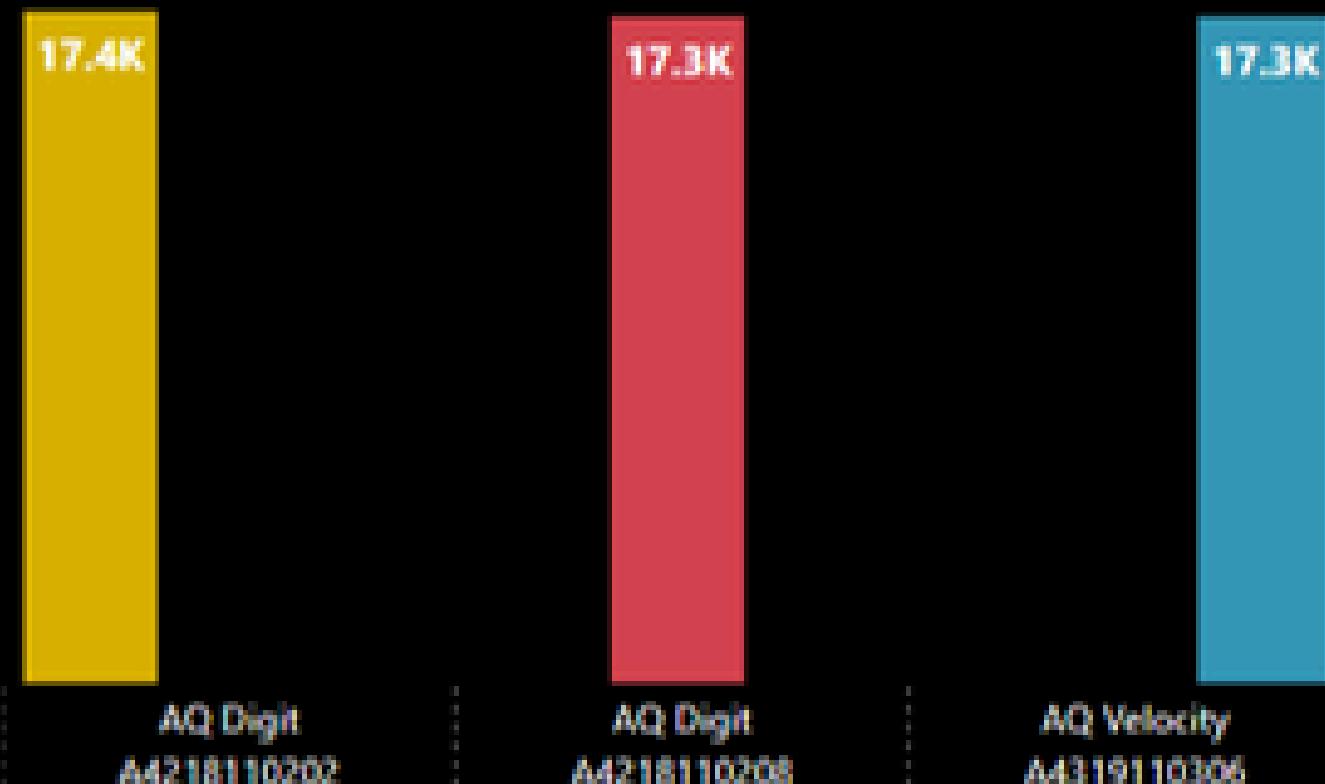
Division P&A



INSIGHTS

in stock to meet demand

Division PC



capitalize on product popularity.

*Thank
You*