AtliQ
Hardware

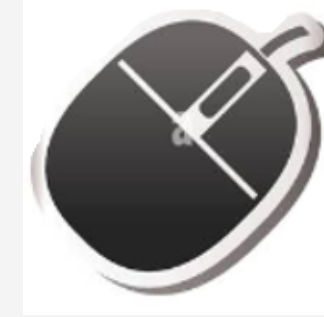# Consumer Goods Ad_Hoc Insights

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Agenda

- Introduction
- Problem Statement
- Products Overview
- Global Market Overview
- Ad-Hoc Requests
- Data and Tools Used
- Query Results
- Visualizations
- Insights

AtliQ Hardwares (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too.
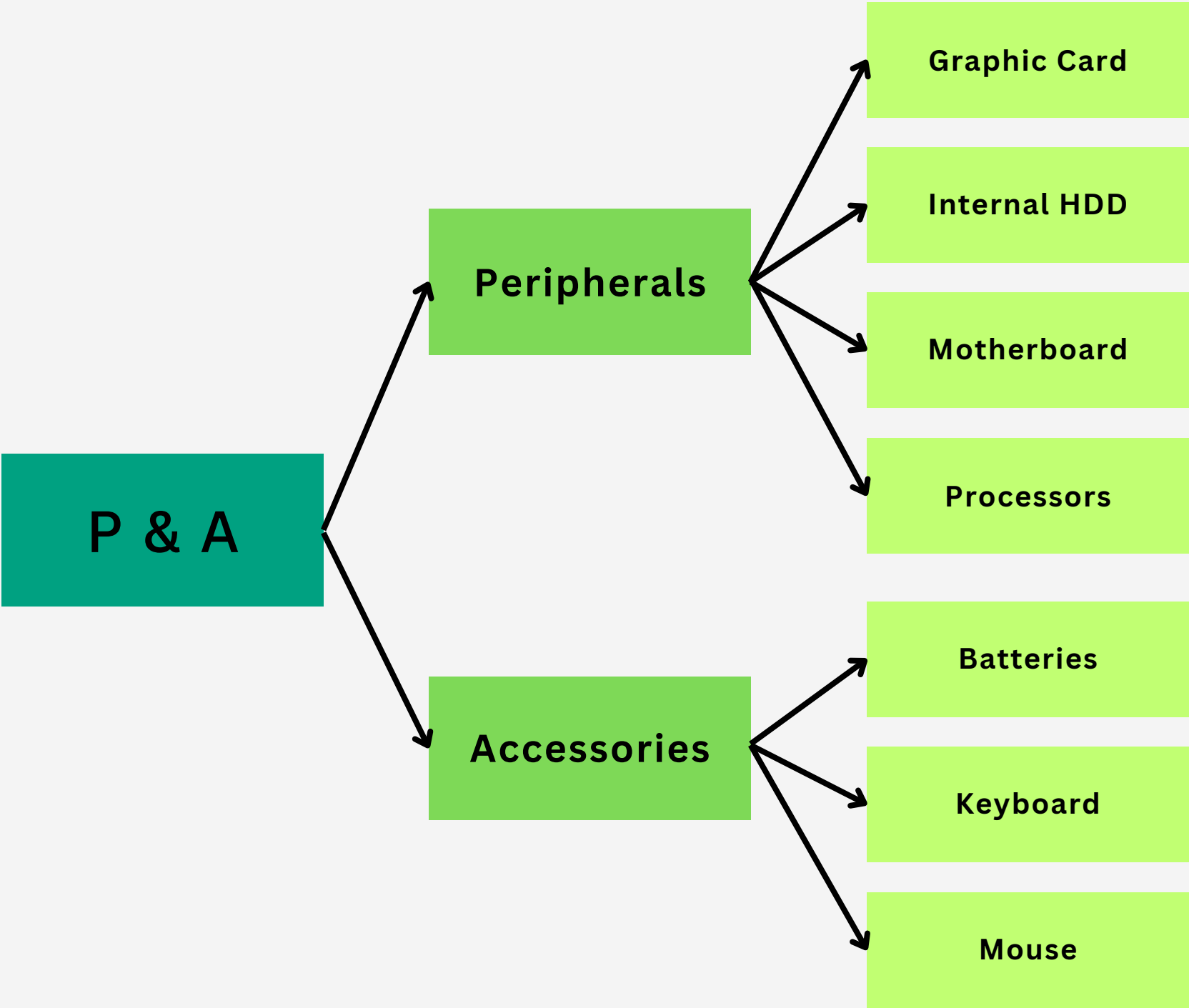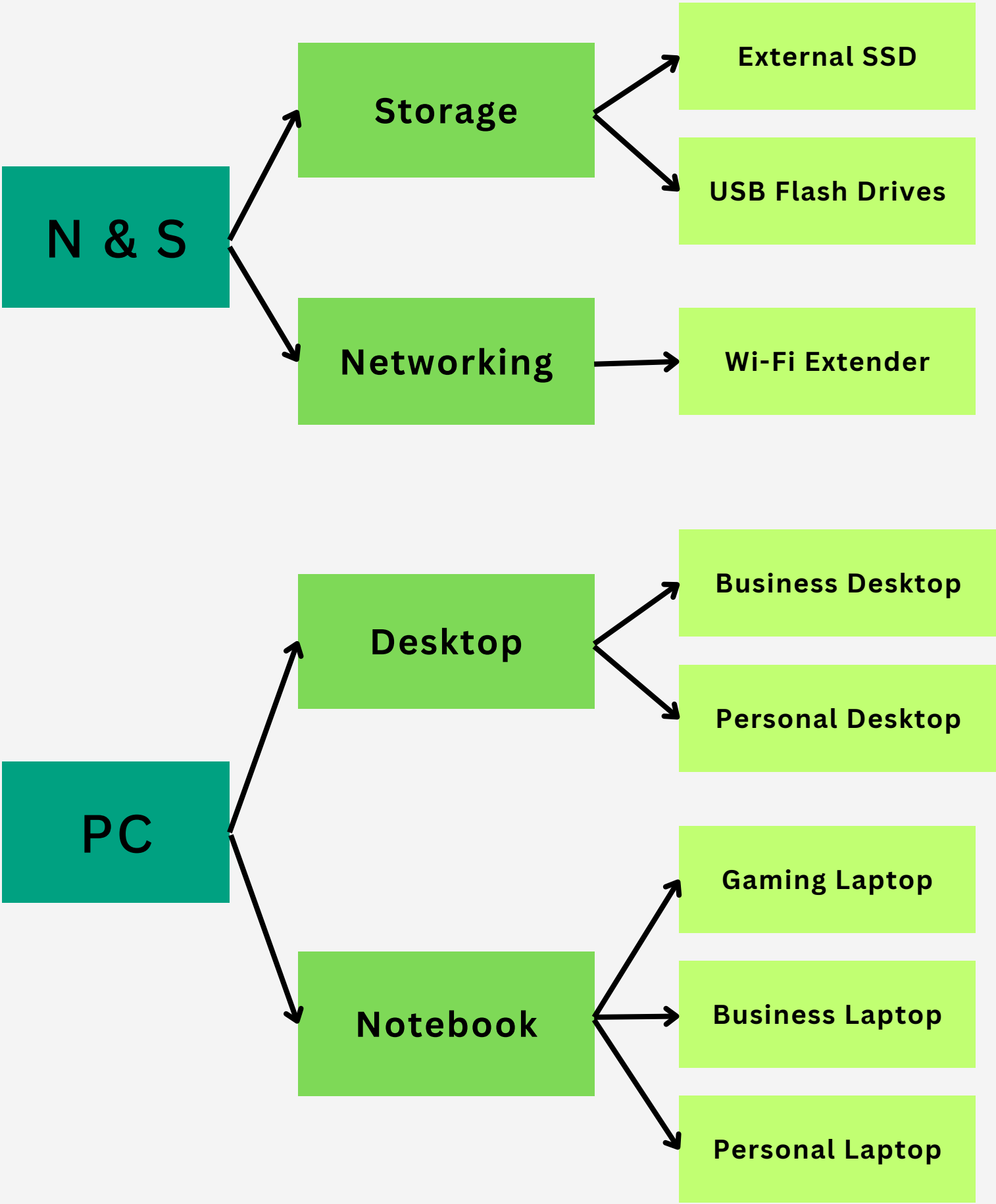
Problem Statement

- The Management needs sufficient insights to make quick and smart data-informed decisions.
- They want to expand their data analytics team by adding several junior data analysts.
- AtliQ's data analytics director, Tony Sharma, wanted to hire someone who is good at both tech and soft skills. Hence, decided to conduct a SQL challenge through which he will be able to analyze candidates who are good at both the skills.

Products Overview

Legend: ■ Division ■ Segment ■ Category

N & S
- Storage
  - External SSD
  - USB Flash Drives
- Networking
  - Wi-Fi Extender

PC
- Desktop
  - Business Desktop
  - Personal Desktop
- Notebook
  - Gaming Laptop
  - Business Laptop
  - Personal Laptop

P & A
- Peripherals
  - Graphic Card
  - Internal HDD
  - Motherboard
  - Processors
- Accessories
  - Batteries
  - Keyboard
  - Mouse

Global Market Overview

- AtliQ operates its business in different regions namely APAC, EU, LATAM and NA.
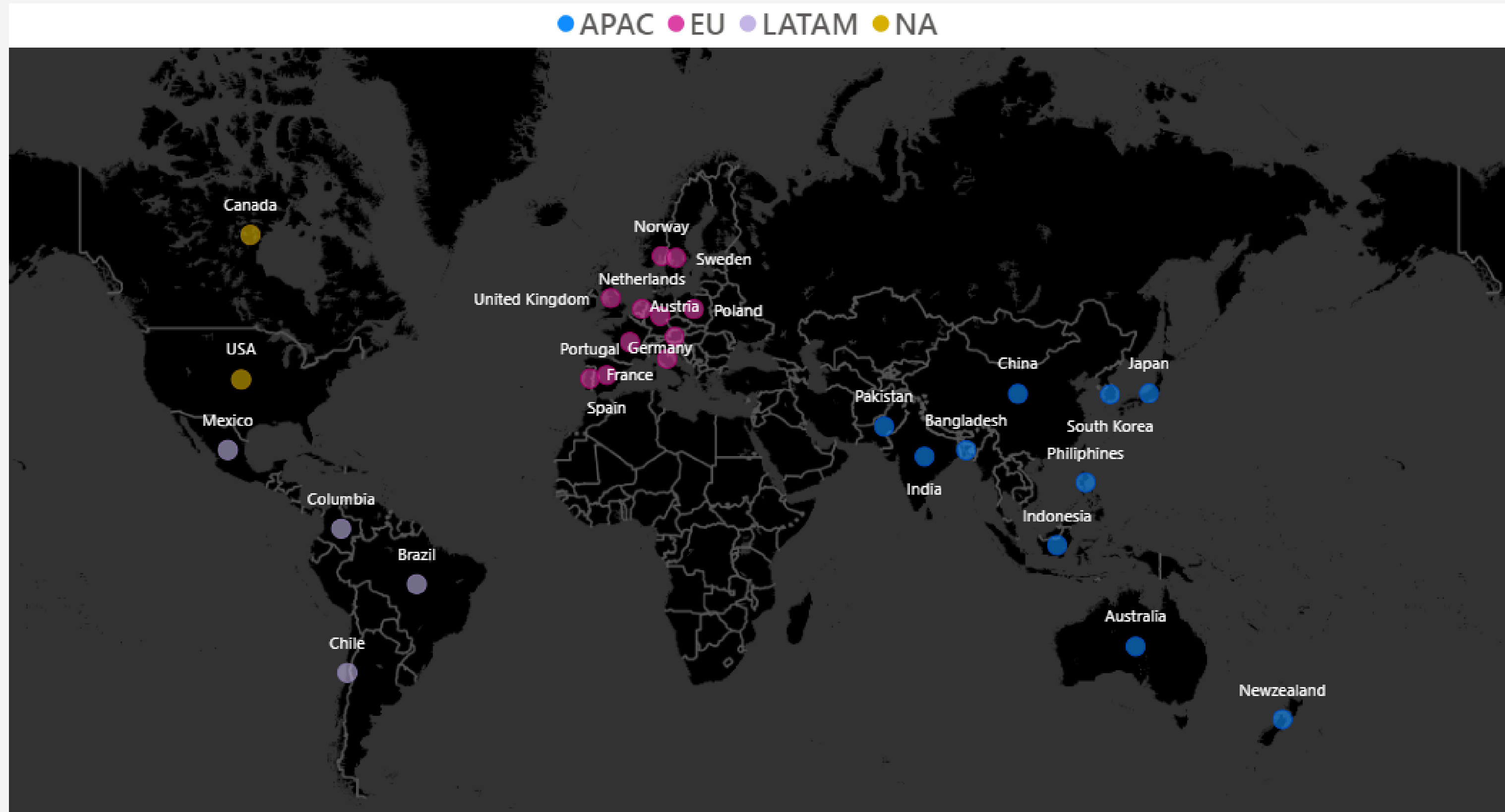
Ad - Hoc Requests

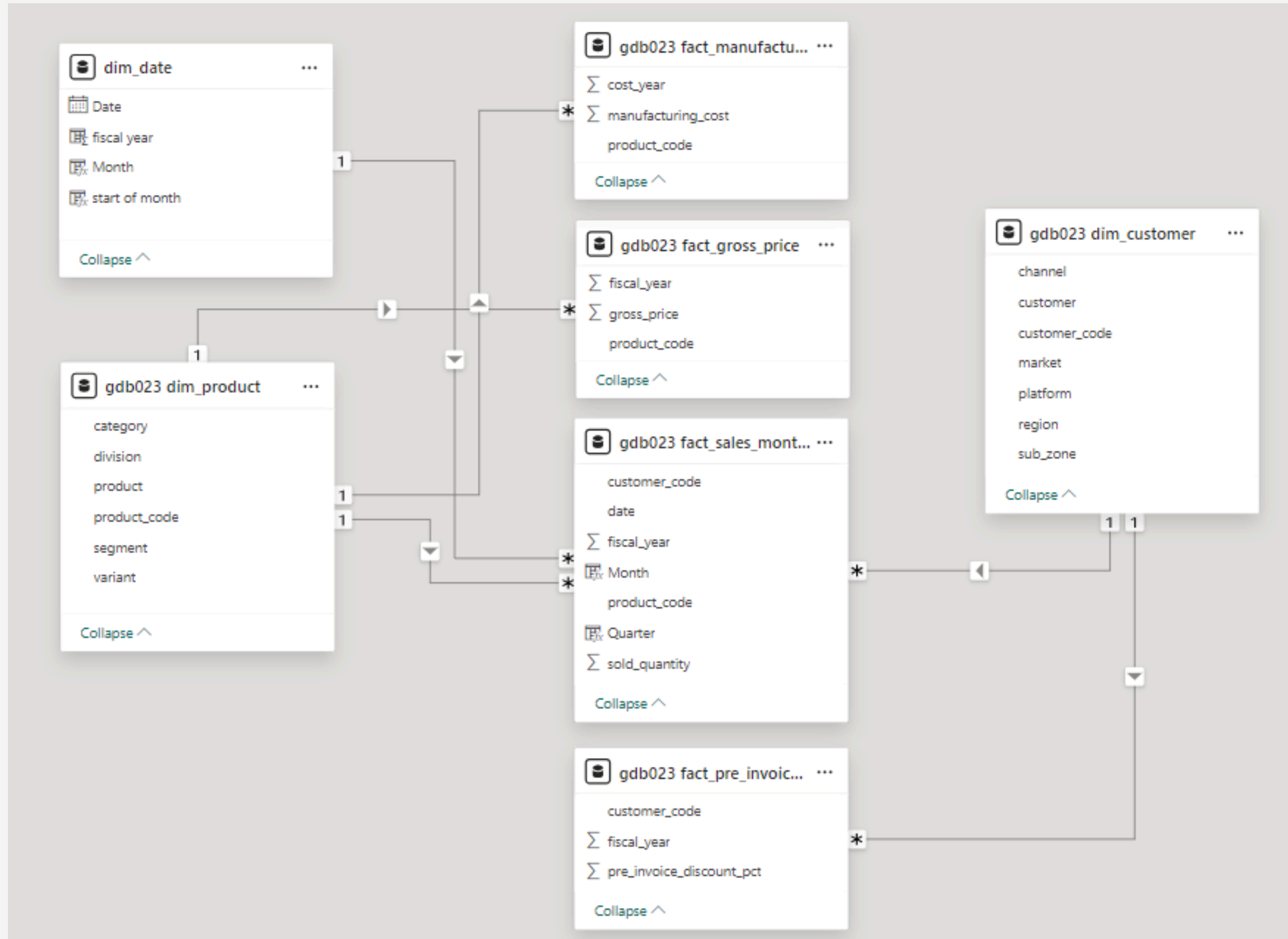## Codebasics SQL Challenge

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

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

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

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

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,
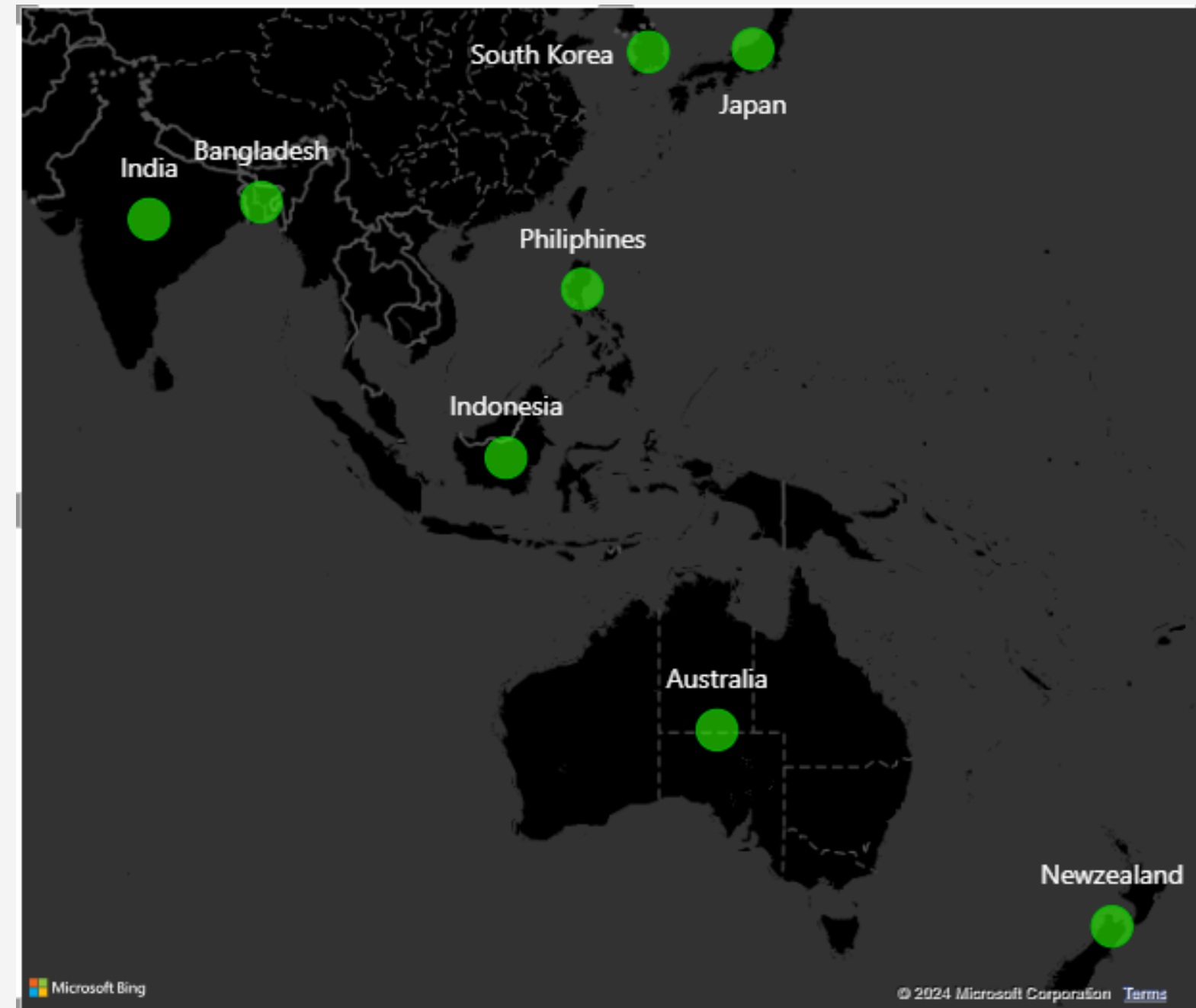   - division
    - product_code

Data

Tools Used

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
Philiphines
South Korea

Insights

AtliQ Exclusive operates its business in **8** major markets in the APAC region, among which **India** has the most Customers.
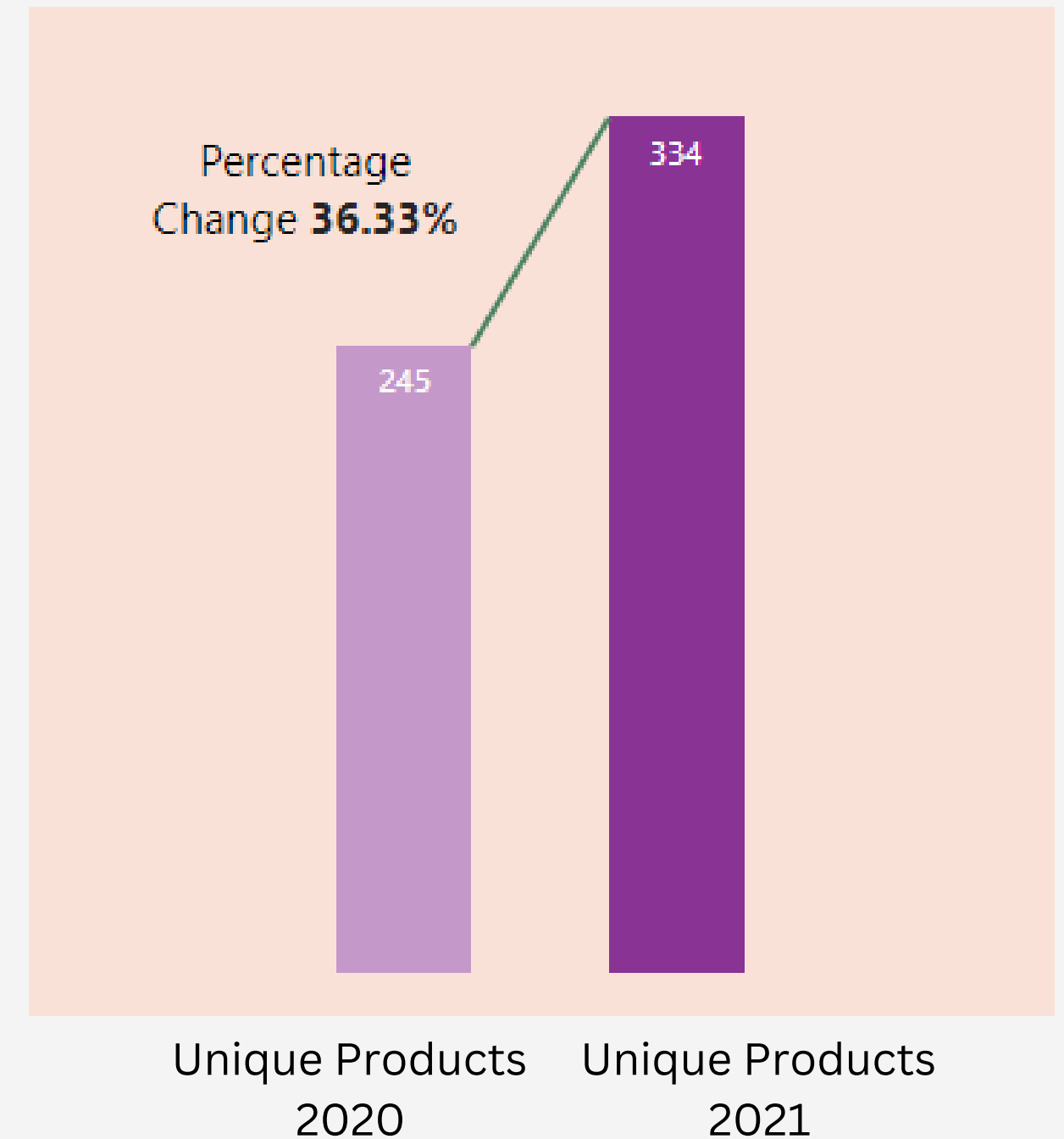
2. What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,

unique_products_2020
unique_products_2021
percentage_chg

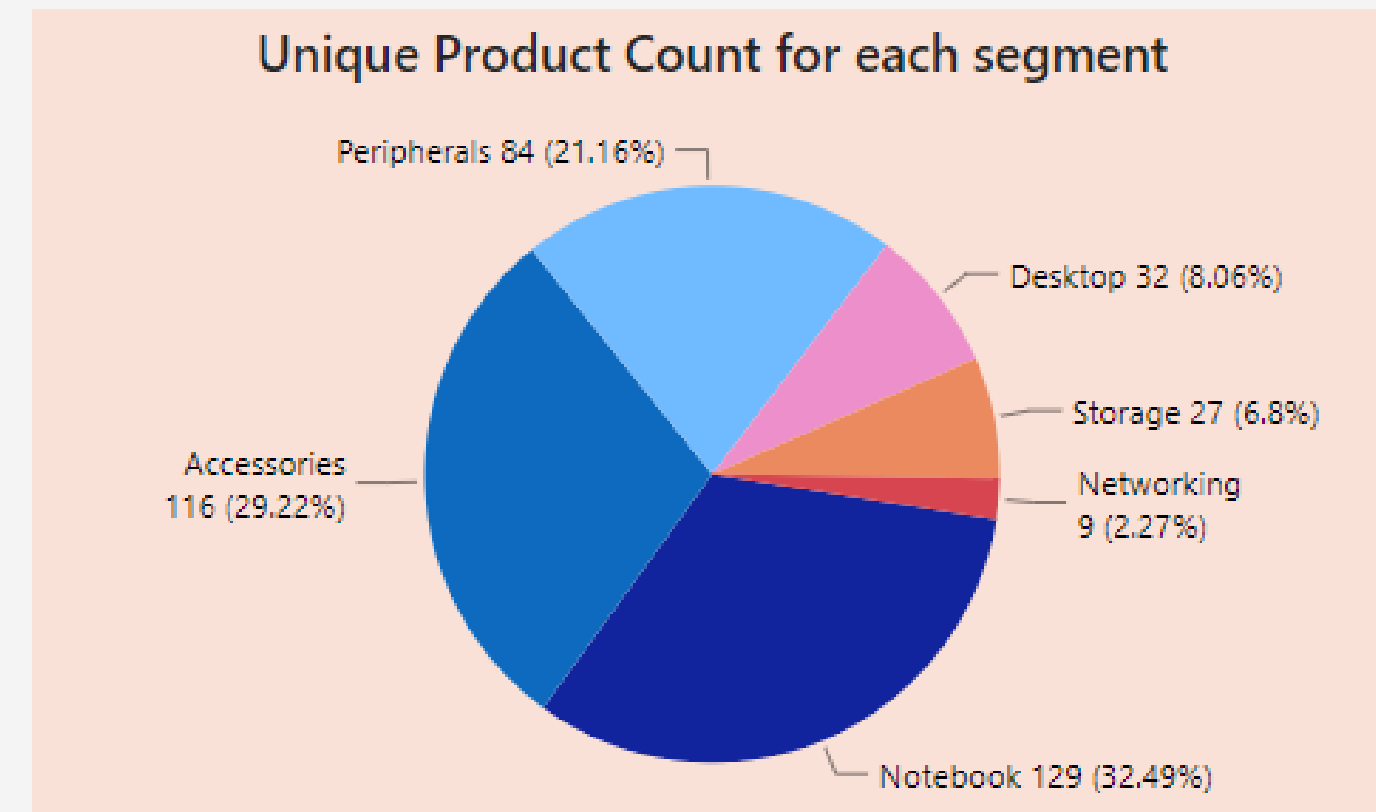| unique_products_2020	unique_products_2021	percentage_chg
245	334	36.3265

Insights

That's an impressive growth rate! A **36.33% increase** in unique products can significantly enhance a company's competitive edge. It likely means the company has been innovating and diversifying its offerings, which can attract more customers and meet a wider range of needs.

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,

unique_products_2020
unique_products_2021
percentage_chg

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

Unique Product Count for each segment

Peripherals 84 (21.16%)
Desktop 32 (8.06%)
Storage 27 (6.8%)
Networking 9 (2.27%)
Accessories 116 (29.22%)
Notebook 129 (32.49%)

Insights
Notebook, Accessories and Peripherals make up over **80%** of the Unique Products whereas **Desktop, Storage and Networking** have fewer products with less than **20%** of total Products.
Recommendations - Enhance marketing efforts for the Desktop, Storage and Networking categories to boost their visibility and sales. This could include promotions, Free OS or Antivirus installation for Desktop, bundling products to increase their appeal.

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_2	product_count_2	difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5

segment	Product Count 2021	Product Count 2020	Difference
Accessories	103	69	34
Notebook	108	92	16
Peripherals	75	59	16
Desktop	22	7	15
Storage	17	12	5
Networking	9	6	3

Insights

The **Accessories** segment saw the **largest increase** in unique products followed by Notebook, Peripherals and Desktop.
Storage and **Networking** experienced **smaller increases** compared to 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
A6120110206	AQ HOME Allin1 Gen 2	240.54
A2118150101	AQ Master wired x1 Ms	0.89

Highest Manufacturing Cost

$240.54

A6120110206

AQ HOME Allin1 Gen 2

Personal Desktop

Lowest Manufacturing Cost

$0.89

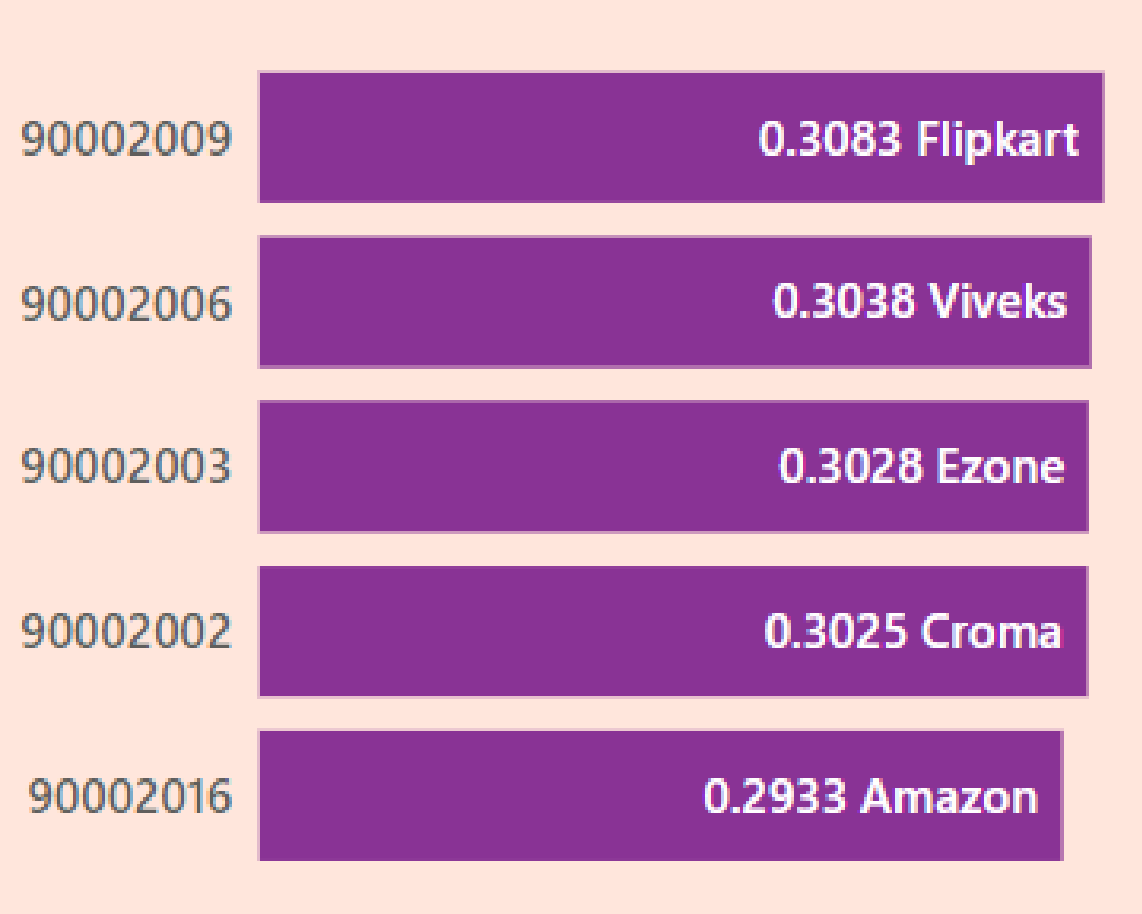

A2118150101

AQ Master wired x1 Ms

Mouse

Insights

The **AQ HOME Allin1 Gen 2 (Personal Desktop)** has the **Highest** Manufacturing Cost of **$240.54**.

The **AQ Master Wired x1 (Mouse)** has the **lowest** manufacturing cost of **$0.89**.

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	pre_invoice_discount_pct
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

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

Insights
Among Top 5 Indian Customers, the **Highest** and **Lowest** Average Pre-Invoice Discount Percentage was given to **Flipkart (30.83%)** and **Amazon (29.33%)** respectively for FY 2021.

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 (2019)	2020	9092670.34
October (2019)	2020	10378637.6
November (2019)	2020	15231894.97
December (2019)	2020	9755795.06
January (2020)	2020	9584951.94
February (2020)	2020	8083995.55
March (2020)	2020	766976.45
April (2020)	2020	800071.95
May (2020)	2020	1586964.48
June (2020)	2020	3429736.57
July (2020)	2020	5151815.4
August (2020)	2020	5638281.83
September (2020)	2021	19530271.3
October (2020)	2021	21016218.21
November (2020)	2021	32247289.79
December (2020)	2021	20409063.18
January (2021)	2021	19570701.71
February (2021)	2021	15986603.89
March (2021)	2021	19149624.92
April (2021)	2021	11483530.3
May (2021)	2021	19204309.41
June (2021)	2021	15457579.66
July (2021)	2021	19044968.82
August (2021)	2021	11324548.34
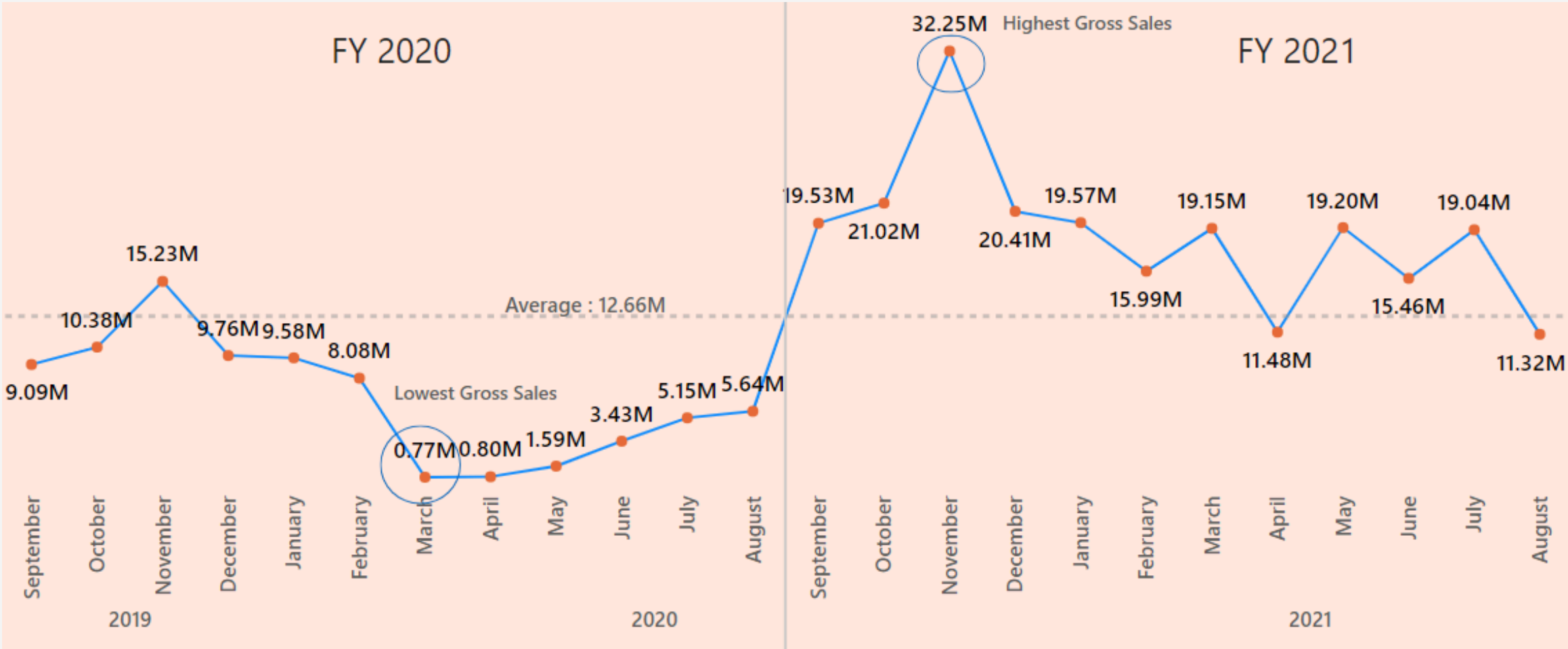
Insights

AtliQ Exclusive, **Lowest Gross sales (0.77M)** were recorded in the month of **March** 2020 possibly due to the initial impact of the first wave of COVID, but company recovered soon and achieved its **highest ever gross sales (32.25M)** for these 2 years in the month of **November** 2020.

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
qtr1	7005619
qtr2	6649642
qtr4	5042541
qtr3	2075087
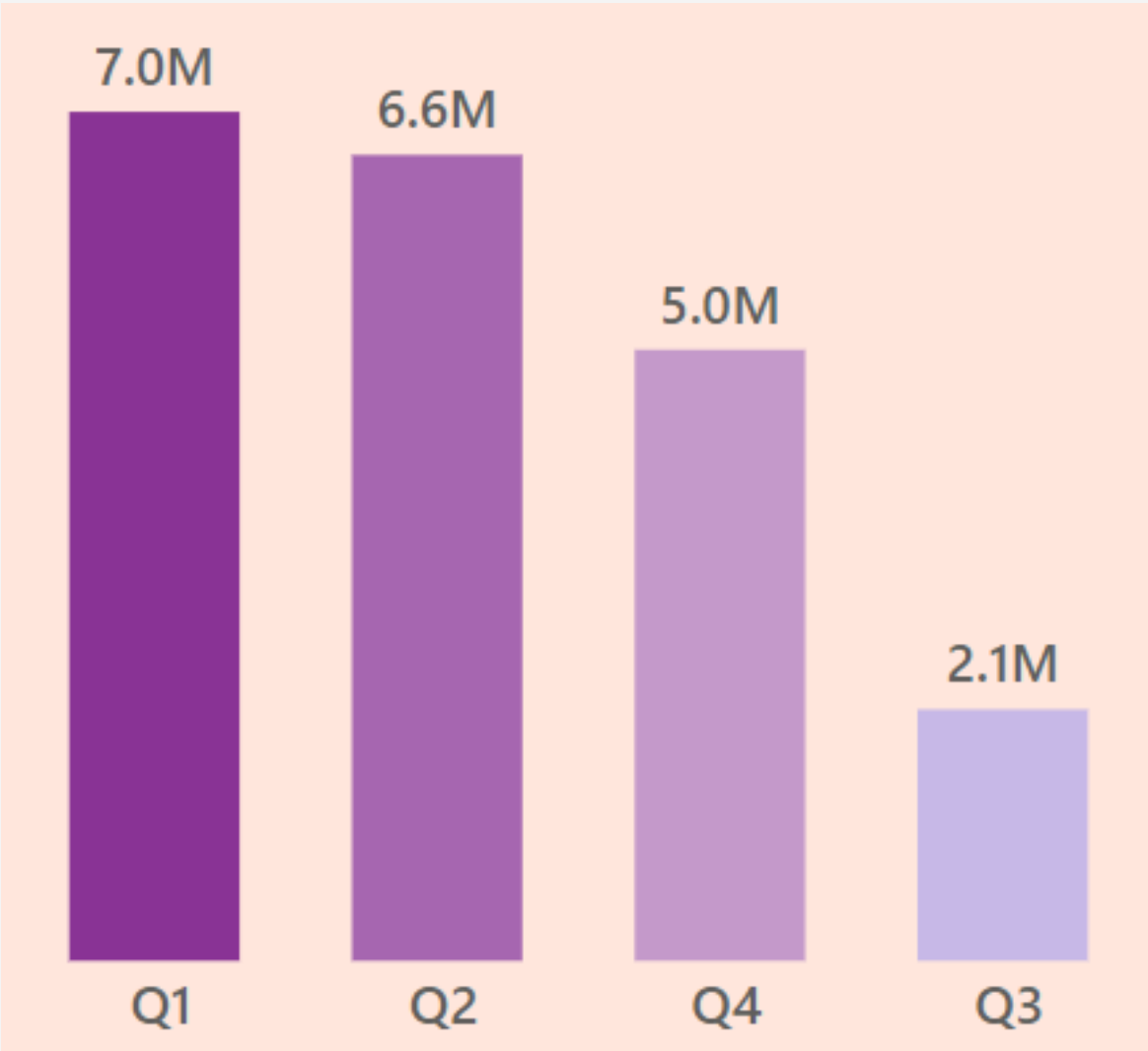
Insights
For **FY 2020**, **Quarter1** stands out by recording the **highest units sold (7M),** whereas **Quarter3** faded away by recording the **lowest units sold (2.1M).**

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	1924.17	73.22
Direct	406.69	15.47
Distributor	297.18	11.31

Distributor
297.18M (11.31%)

Direct
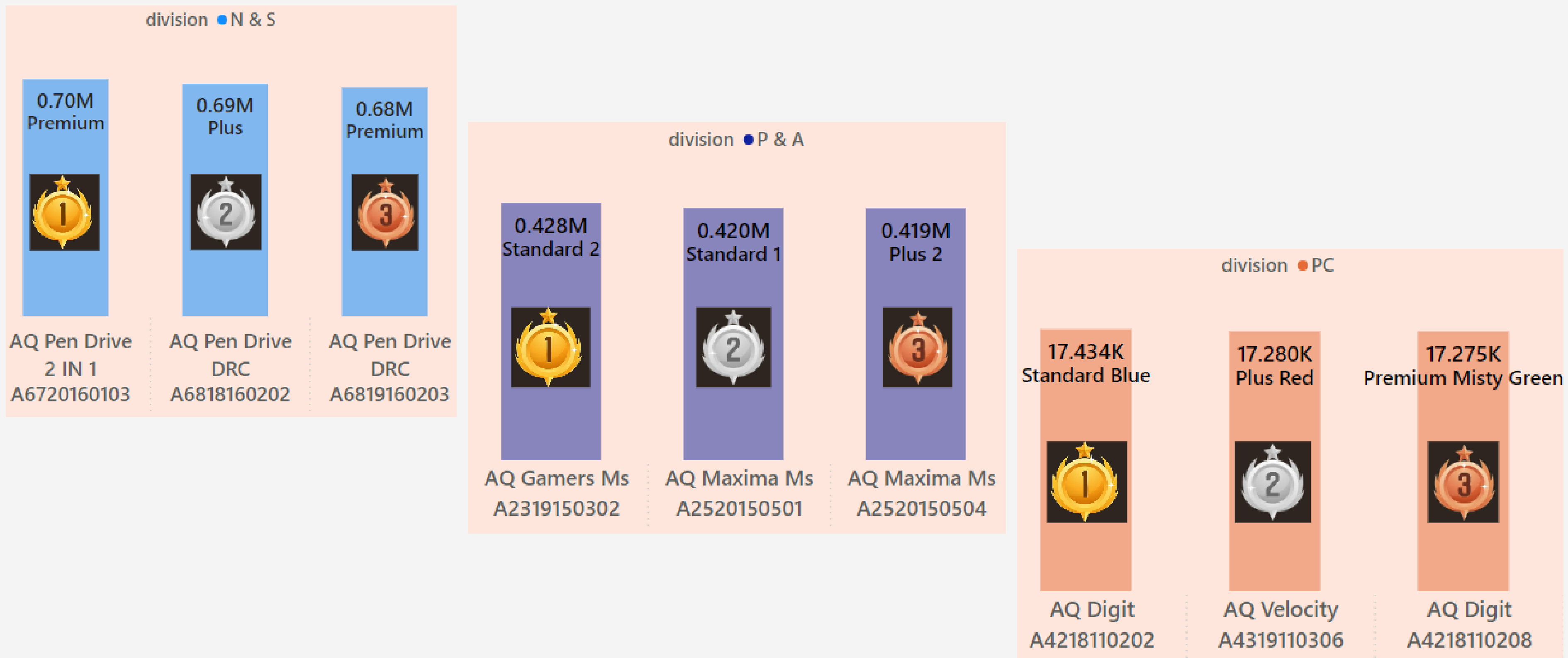406.69M (15.47%)

Retailer
1924.17M (73.22%)
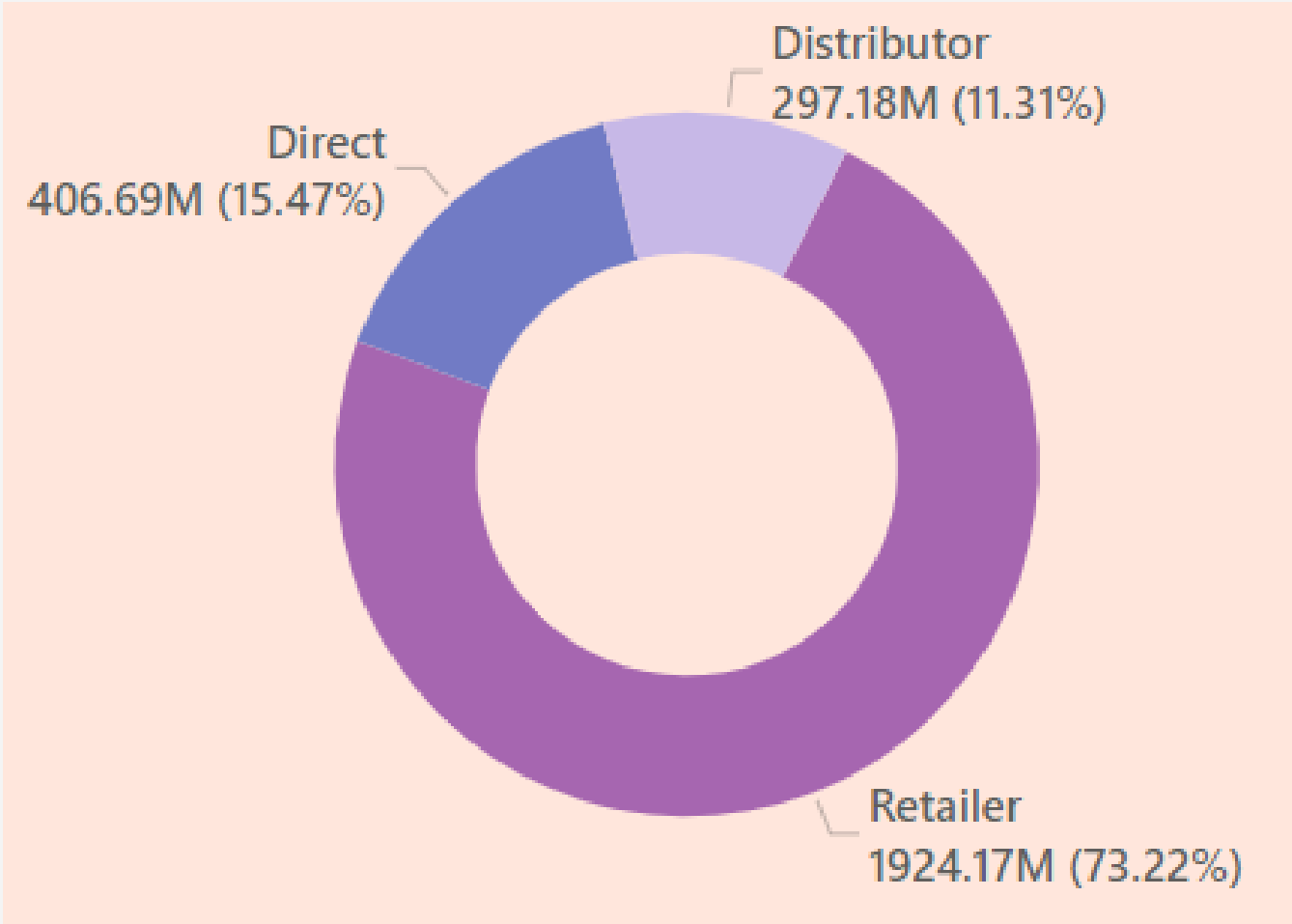
Insights

For FY 2021, the **Retailer** channel was a **major** contributor to the company's gross sales, making up **73.22%** of the total. In contrast, the **Distributor** channel had the **smallest** contribution at **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,

channel
gross_sales_mln
percentage

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

division ● N & S

0.70M Premium	0.69M Plus	0.68M Premium
🥇1	🥈2	🥉3
AQ Pen Drive 2 IN 1 A6720160103	AQ Pen Drive DRC A6818160202	AQ Pen Drive DRC A6819160203

division ● P & A

0.428M Standard 2	0.420M Standard 1	0.419M Plus 2
🥇1	🥈2	🥉3
AQ Gamers Ms A2319150302	AQ Maxima Ms A2520150501	AQ Maxima Ms A2520150504

division ● PC

17.434K Standard Blue	17.280K Plus Red	17.275K Premium Misty Green
🥇1	🥈2	🥉3
AQ Digit A4218110202	AQ Velocity A4319110306	AQ Digit A4218110208

Insights

The **Top 3** best selling products for each **Division** with highest sold quantity for FY 2021...
N & S - Different Variants of Pen Drive, **P & A** - Variants of Mouse, **PC** - Variants of Laptop.

Thank You