



Ad-hoc Insights

Consumer Goods Domain



Presented by :

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OBJECTIVE



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

- However, the management noticed that they do not get **enough insights** to make quick and **smart data-informed decisions**.
- They want to **expand** their data analytics team by adding **several junior data analysts**.
- **Tony Sharma**, their data analytics director wanted to hire someone who is good at both **tech and soft skills**.
- The company seeks **insights** for **10 ad-hoc requests**.

ATLIQ HARDWARE

AtliQ Hardware is a computer hardware producer company.

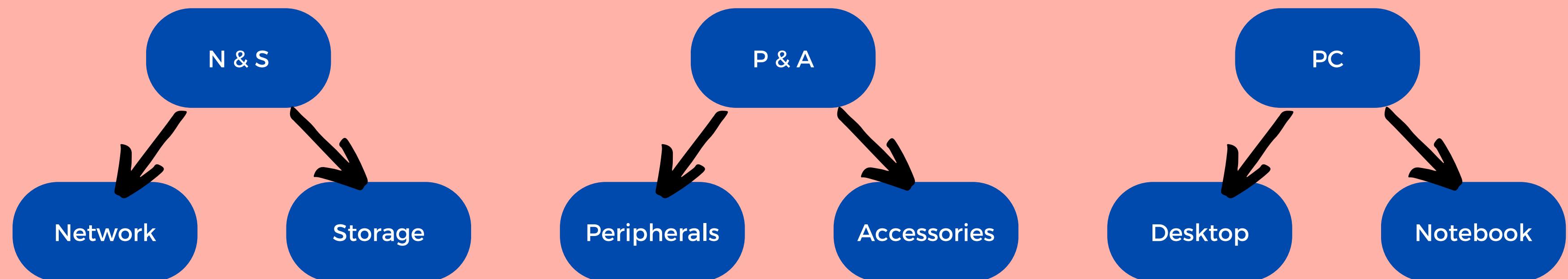
AtliQ's products are divided into 3 main divisions:

- N & S
- P & A
- PC

**Fiscal Year starts in September
and ends in August.**

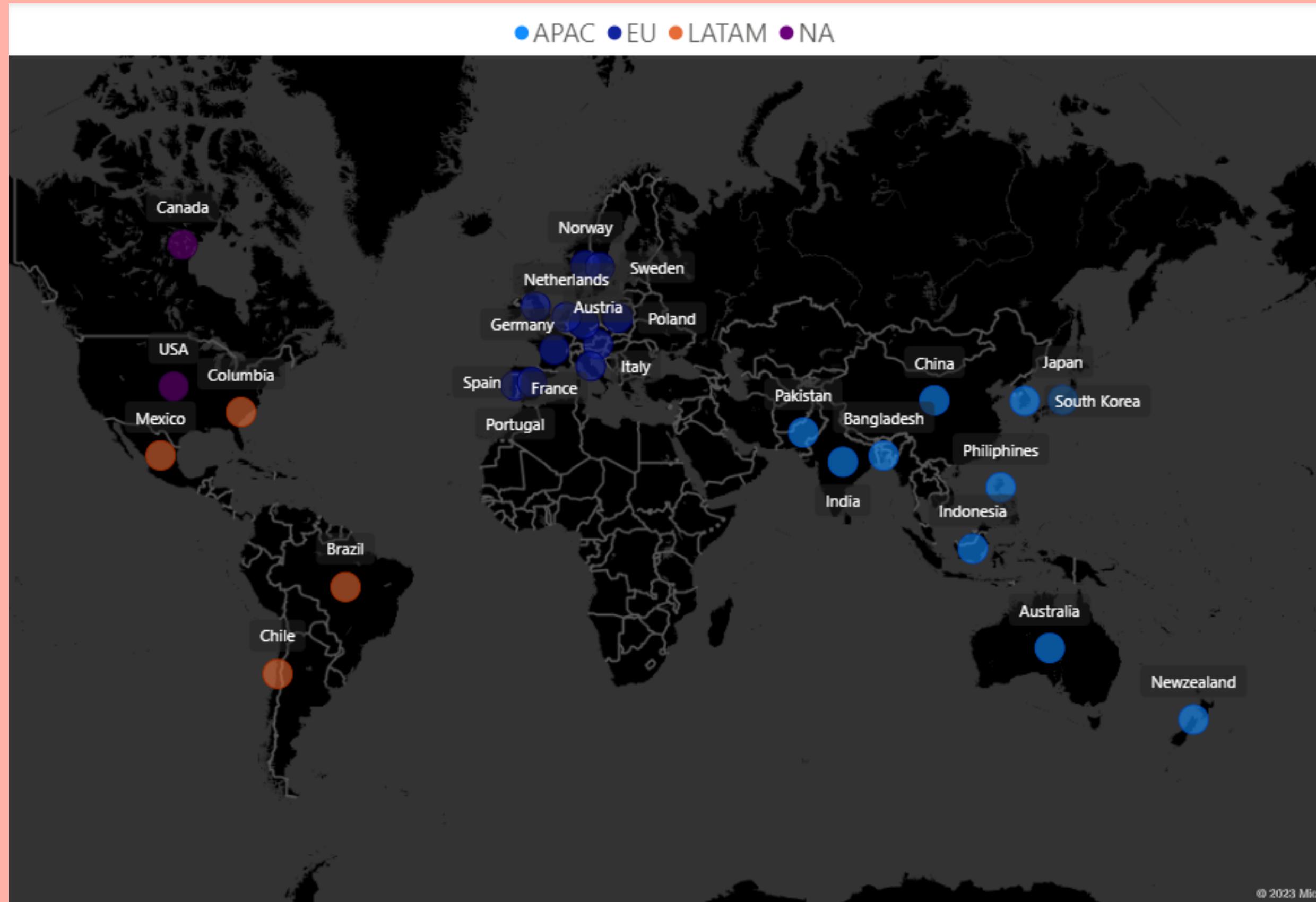
Sep 2019 to Aug 2020 --> FY 2020

Sep 2020 to Aug 2021 --> FY 2021

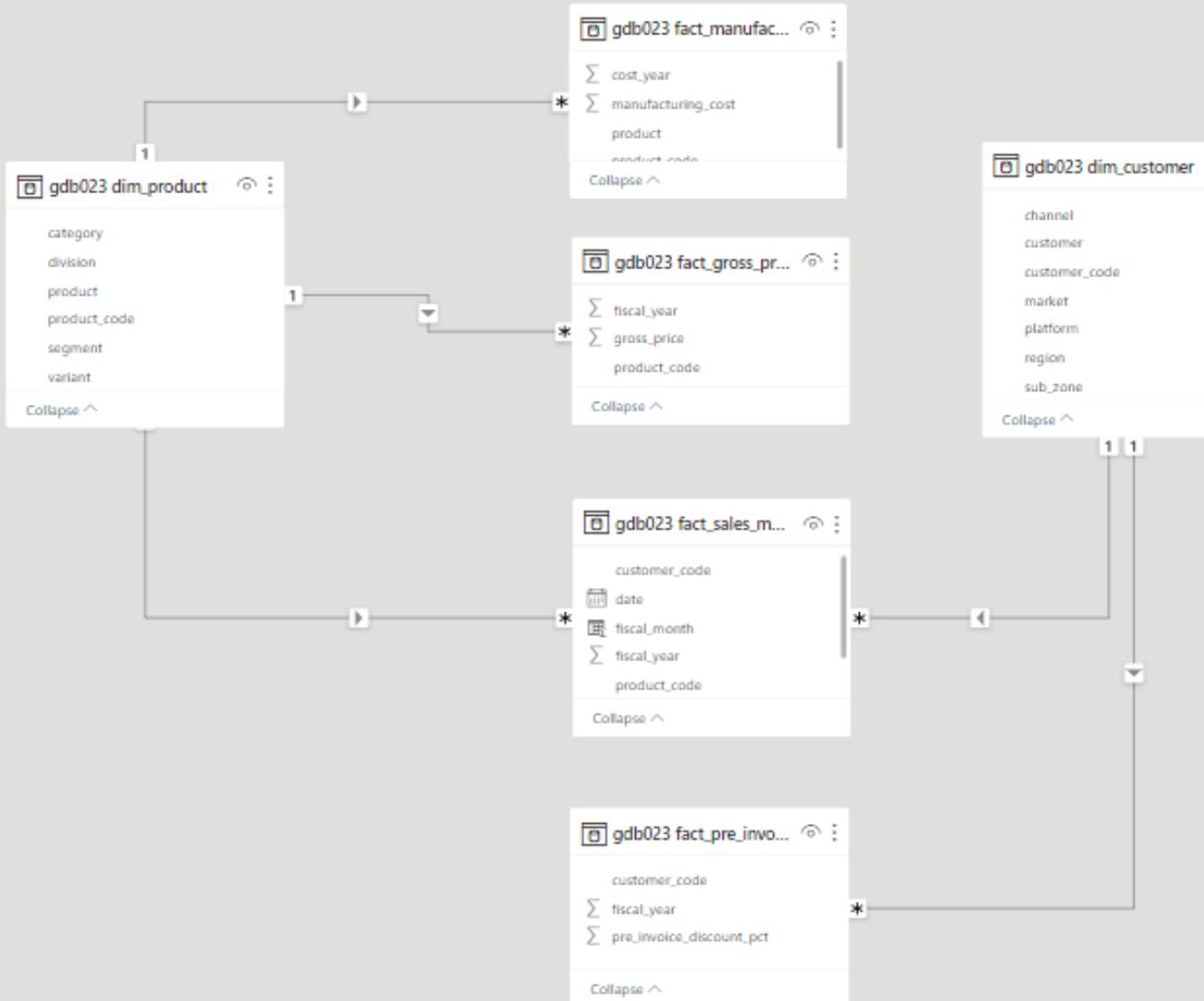
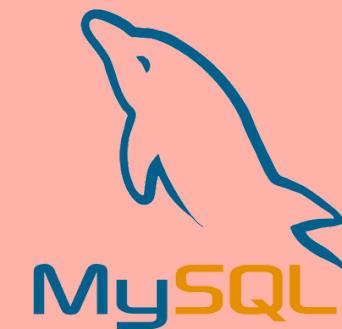


CUSTOMER MARKETS OF ATLIQ HARDWARE

- APAC
 - Australia
 - Bangladesh
 - China
 - India
 - Indonesia
 - Japan
 - Newzealand
 - Pakistan
 - Philippines
 - South Korea
- EU
 - Austria
 - France
 - Germany
 - Italy
 - Netherlands
 - Norway
 - Poland
 - Portugal
 - Spain
 - Sweden
 - United Kingdom
- LATAM
 - Brazil
 - Chile
 - Columbia
 - Mexico
- NA
 - Canada
 - USA



RESOURCES



Codebasics SQL Challenge

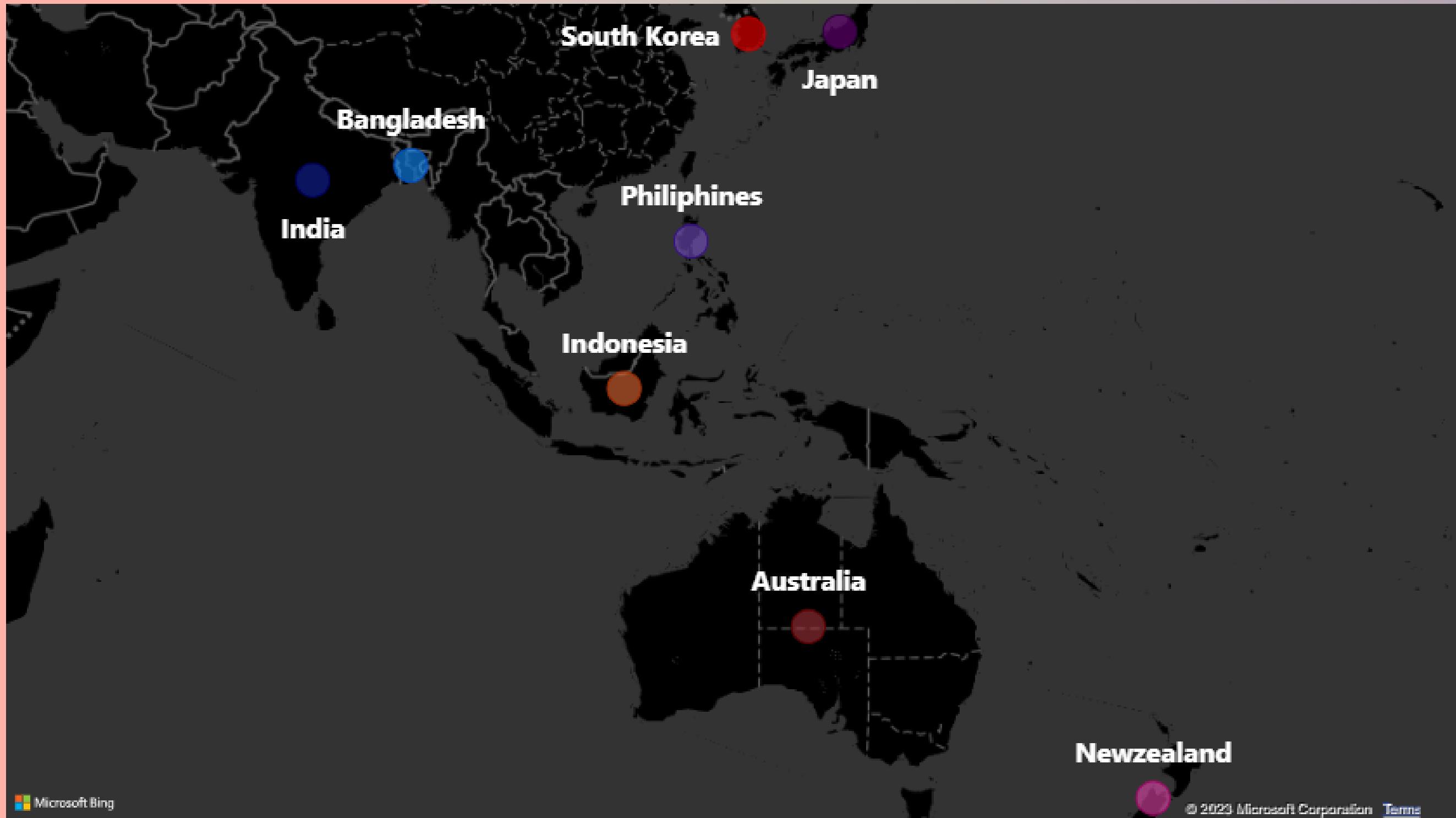
Requests:

- Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.
- 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
- 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
- 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
- Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,
product_code
product
manufacturing_cost
- 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
- 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
- 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
- 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
- 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

Ad-hoc request 1

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



Ad-hoc request 2

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

unique_products_2020

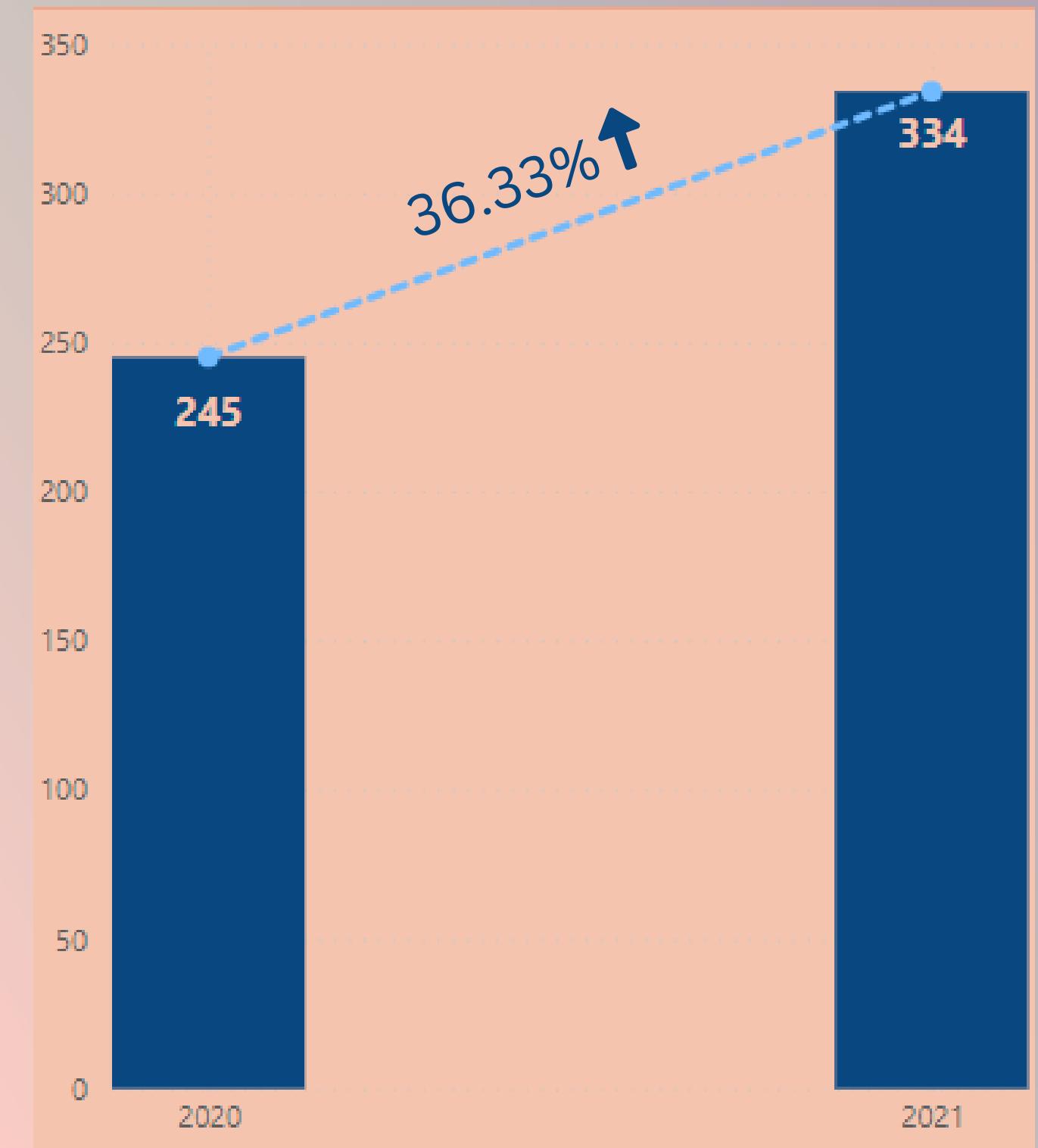
unique_products_2021

percentage_chg

	unique_product_2021	unique_product_2020	percentage_change
▶	334	245	36.33

insights :

The product count had increased by 36.33% from FY 2020 to FY 2021 that indicates the growth of the company.



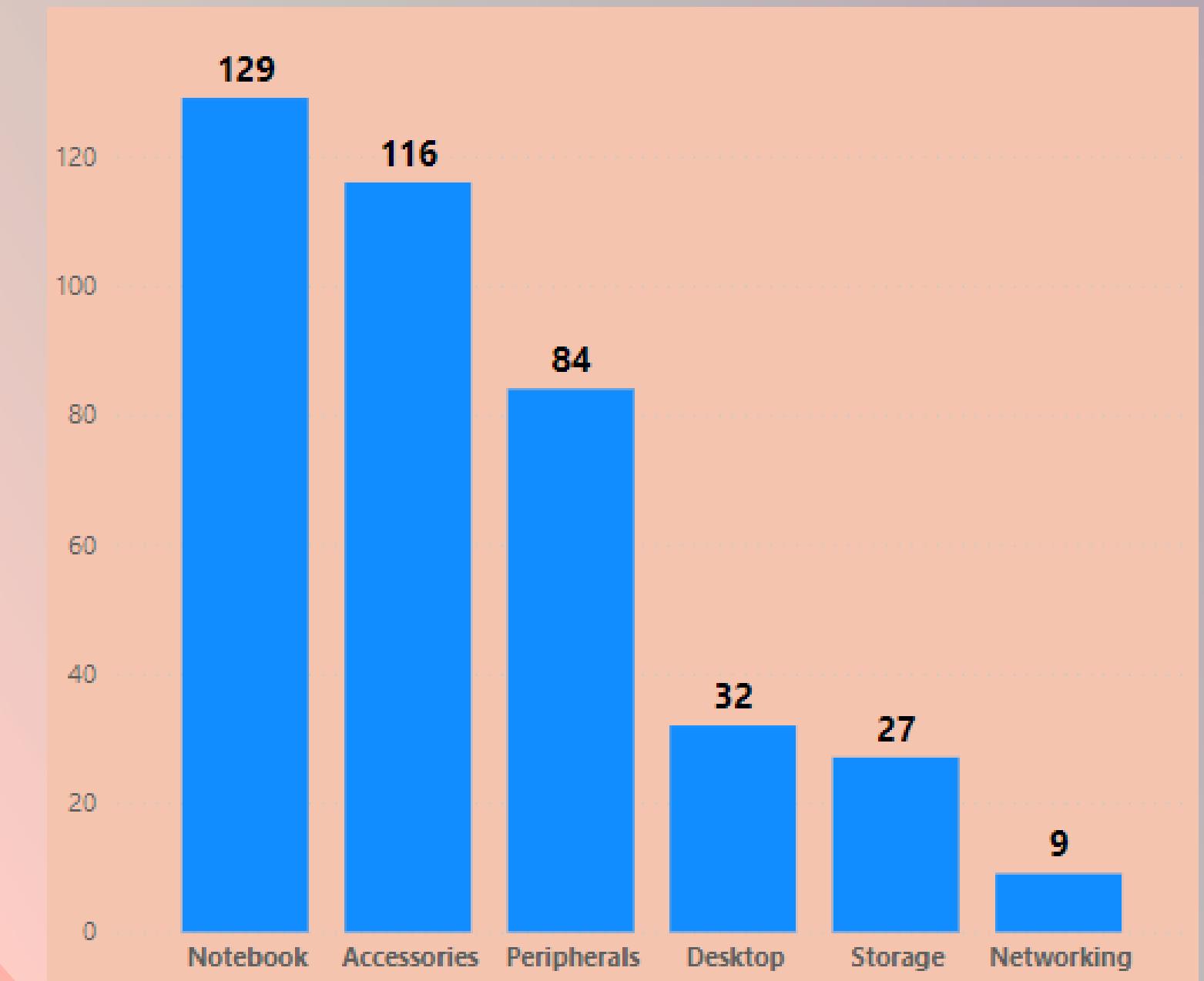
Ad-hoc request 3

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_count
▶	Notebook	129
	Accessories	116
	Peripherals	84
	Desktop	32
	Storage	27
	Networking	9



insights :

- Segments like **Notebook**, **Accessories** and **Peripherals** have high production, whereas **Desktop**, **Storage** and **Networking** have less production.

Suggestions to make high production and sales :

- Student Discounts (as most of the target audience are students for the products)
- Package Deals
- Customer service
- Free vouchers
- Cash back
- Gift cards
- Memberships

Ad-hoc request 4

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	unique_product_2020	unique_product_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

segment	unique_product_2020	unique_product_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 :

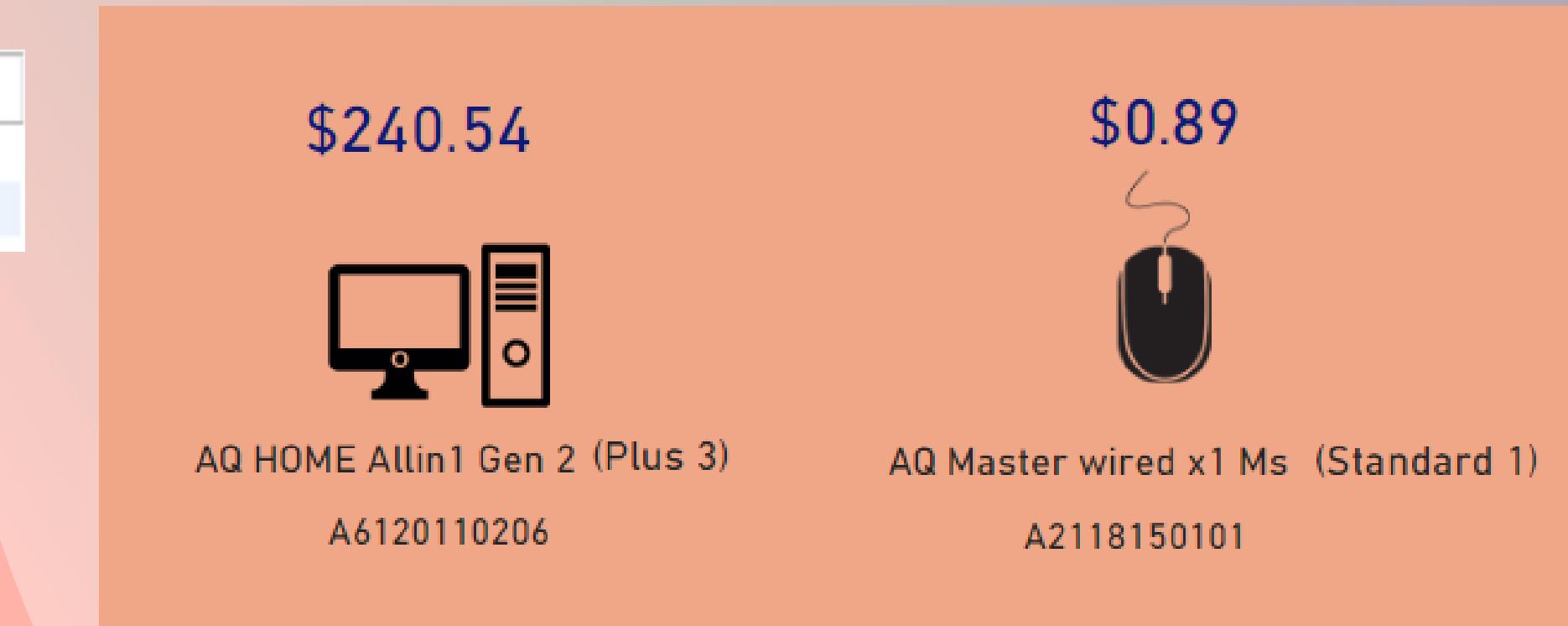
- **Accessories** has the highest production over the years.
- **Storage and Networking** have slower increase in production.

Ad-hoc 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`

product_code	product	cost_year	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	2021	240.5364
A2118150101	AQ Master wired x1 Ms	2020	0.8920



insights :

- **AQ HOME Allin 1 Gen 2** (Plus 3) has the highest manufacturing cost of **\$240.54**.
- **AQ Master wired x1 Ms** (Standard 1) has the lowest manufacturing cost of **\$0.89**.

Ad-hoc request 6

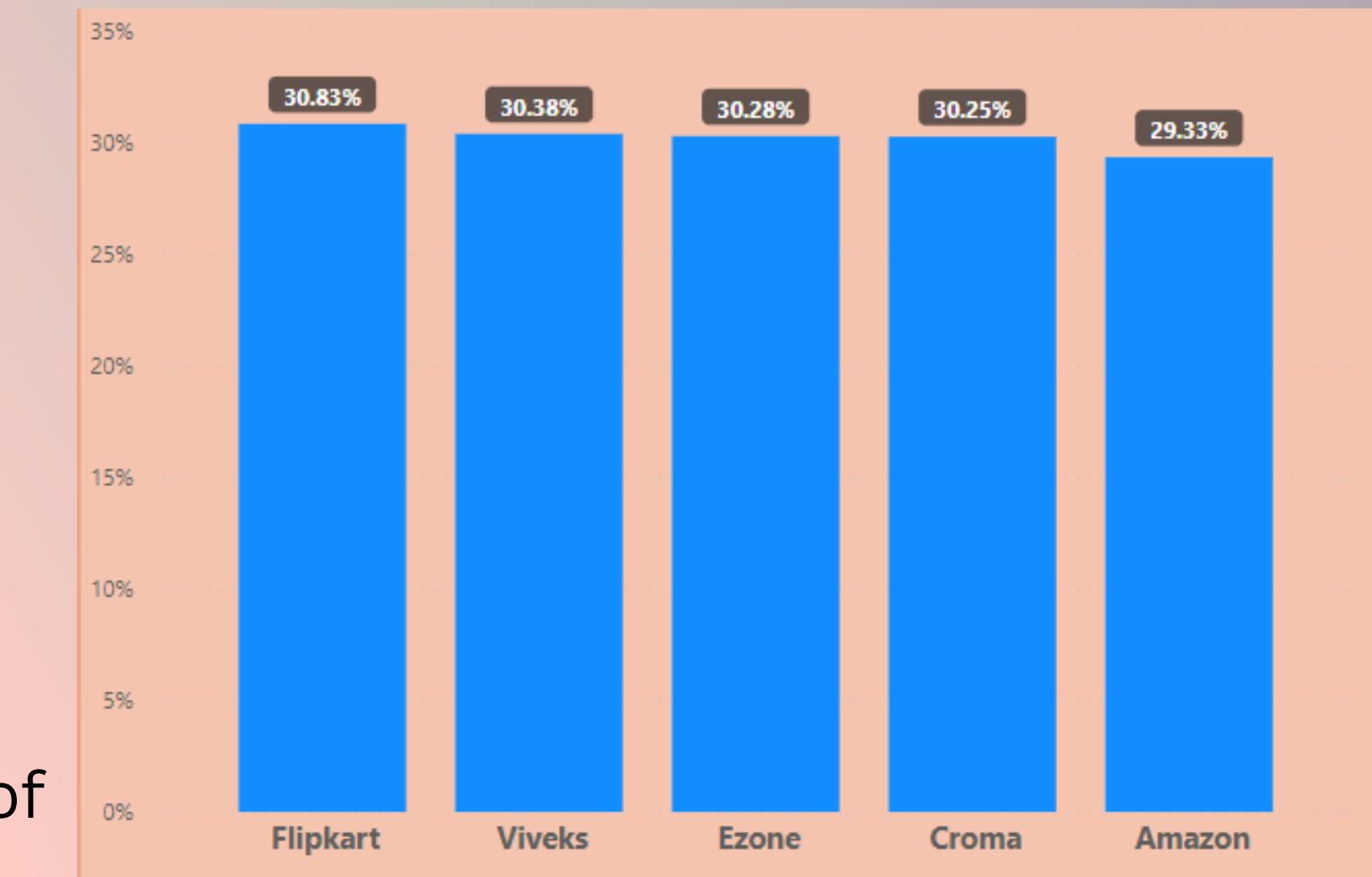
Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields,

customer_code

customer

average_discount_percentage

	customer	customer_code	avg_discount_pct
▶	Flipkart	90002009	0.3083
	Viveks	90002006	0.3038
	Ezone	90002003	0.3028
	Croma	90002002	0.3025
	Amazon	90002016	0.2933

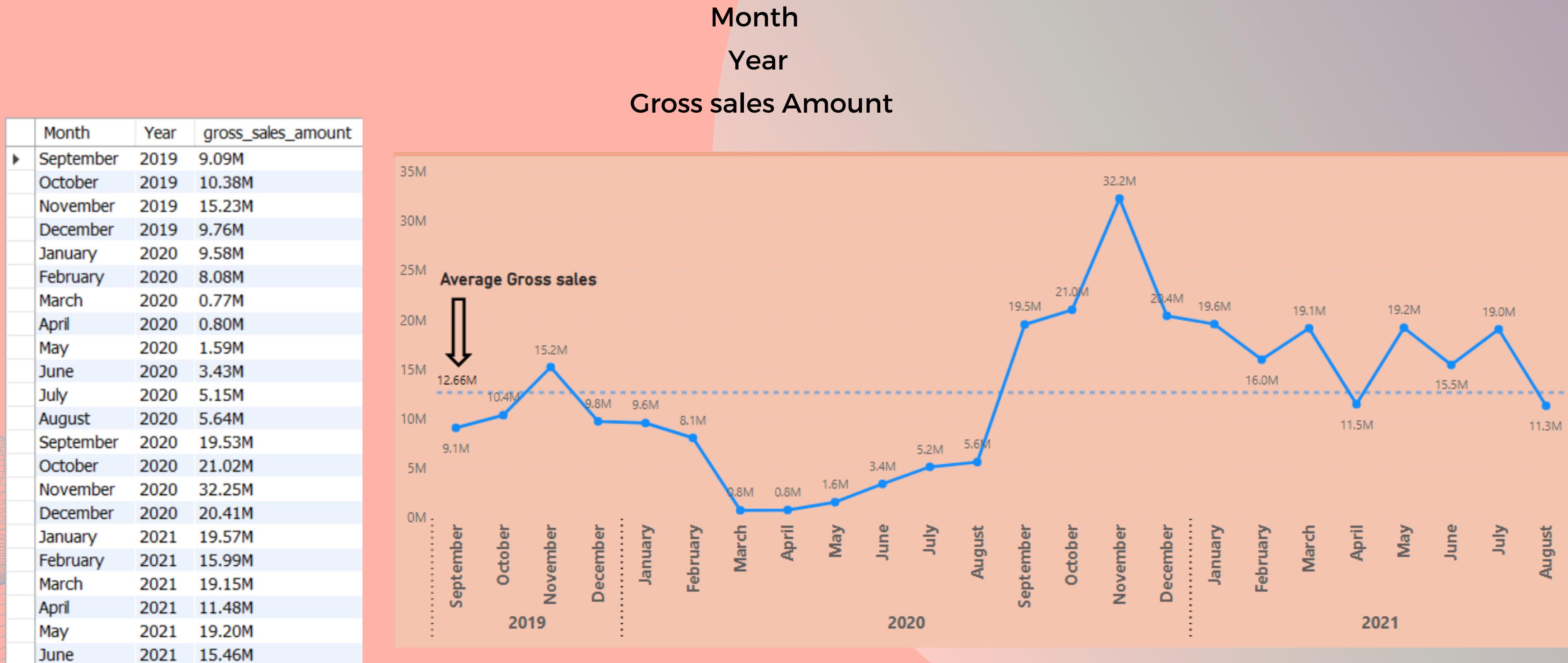


insights :

- **Flipkart** has given the highest pre invoice discount of a average of **30.83%**.
- **Amazon** has given the lowest pre invoice discount of a average of **29.33%**.

Ad-hoc request 7

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:



Insights :

The Gross sales is low in March of 2020 with 0.77M. That is because of the covid pandemic. But after the pandemic, the sales increased gradually. Highest Gross sales happened in the month of November 2020 with 32.35M.

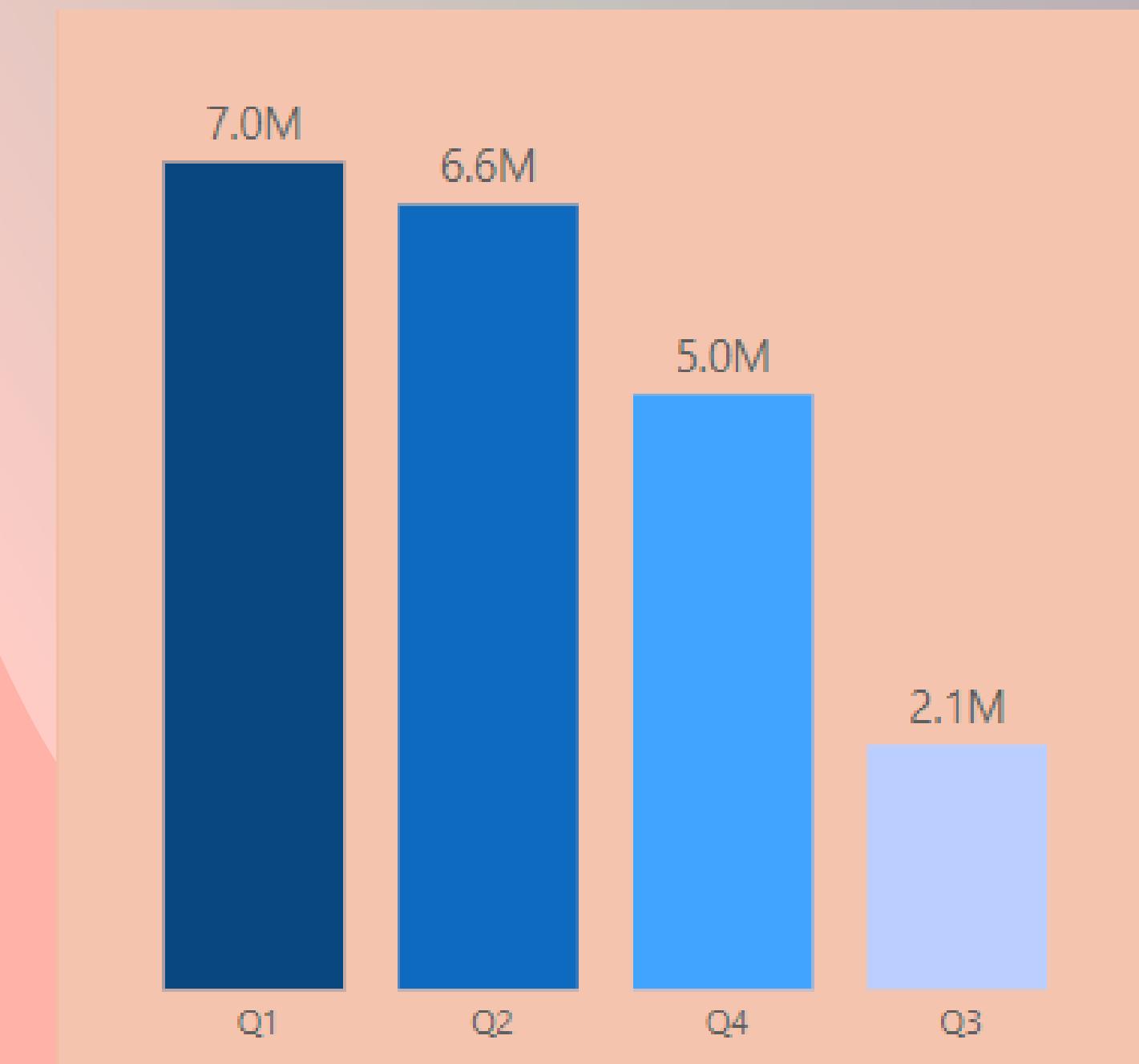
Ad-hoc request 8

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_quantity
▶	Q1	7.01M
	Q2	6.65M
	Q3	2.08M
	Q4	5.04M



Insights :

- Q1 of FY 2020 had experienced more sold units with 7.01M units of products sold.
- Lowest amount of units sold in Q3 of FY 2020 with total quantity of 2.08M.
- In the Month of March, the sales reduced to 0.24M.
- Q1 accounts for 33.72% of total sold quantity for FY 2020.

Quarter	Sum of sold_quantity
■ Q1	7.01M
September	1.76M
October	2.19M
November	3.05M
■ Q2	6.65M
January	1.76M
February	1.70M
December	3.18M
■ Q3	2.08M
March	0.24M
April	0.82M
May	1.02M
■ Q4	5.04M
June	1.56M
July	1.69M
August	1.79M
Total	20.77M

Ad-hoc request 9

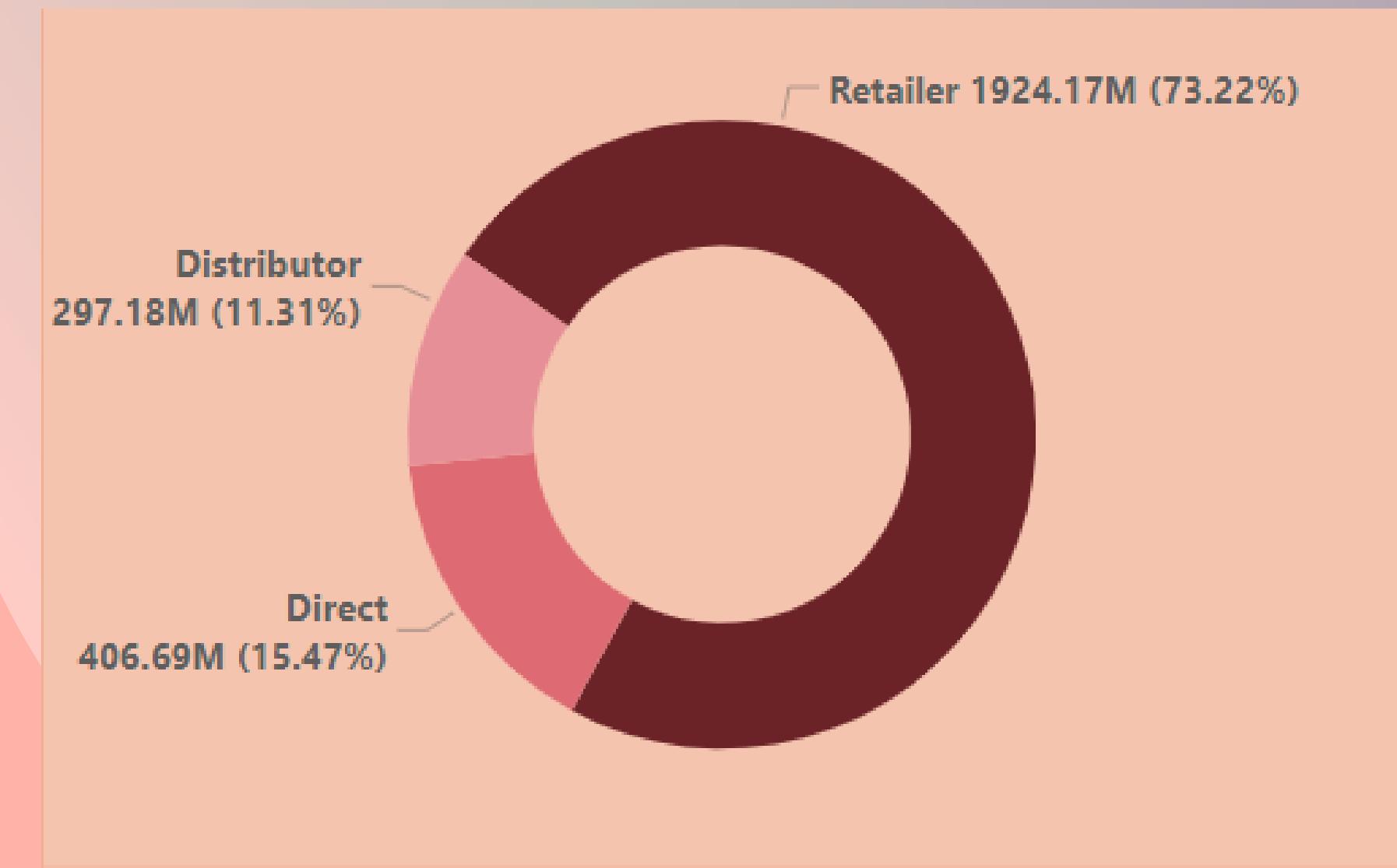
9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields,

channel
gross_sales_mln
percentage

	channel	gross_sales_mln	percentage
▶	Retailer	1924.17	73.22
	Direct	406.69	15.48
	Distributor	297.18	11.31

Insights :

- Retailer channel is accounted for 1924.17M gross sales in FY 2021 with a percentage of 73.22% of grand total.
- Distributor channel brought less sales with 11.31% of grand total.



Ad-hoc request 10

10. Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

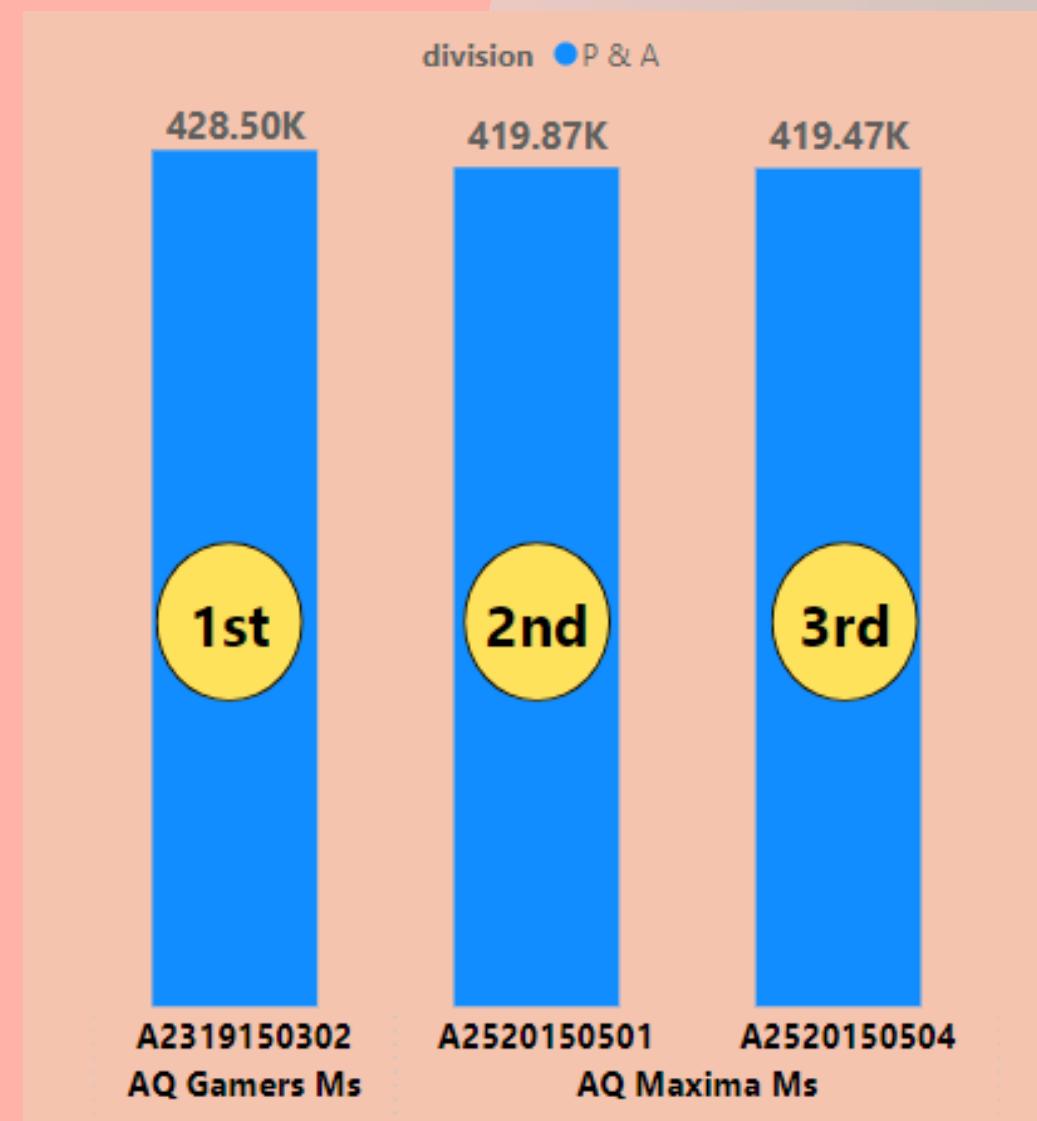
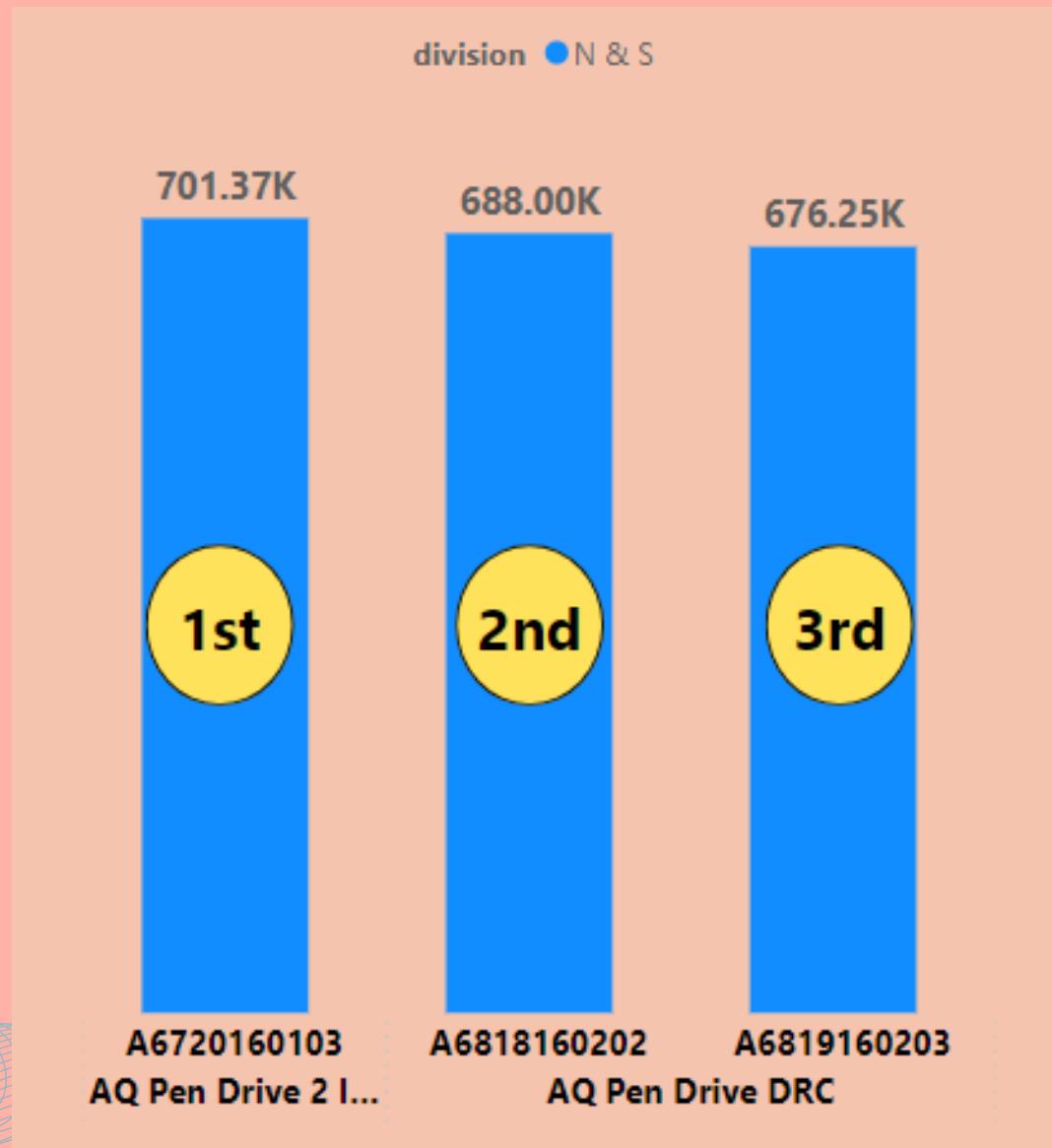
	division	product_code	product	variant	total_qty	rank_order
▶	N & S	A6720160103	AQ Pen Drive 2 IN 1	Premium	701373	1
	N & S	A6818160202	AQ Pen Drive DRC	Plus	688003	2
	N & S	A6819160203	AQ Pen Drive DRC	Premium	676245	3
P & A	A2319150302	AQ Gamers Ms	Standard 2	428498	1	
P & A	A2520150501	AQ Maxima Ms	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	

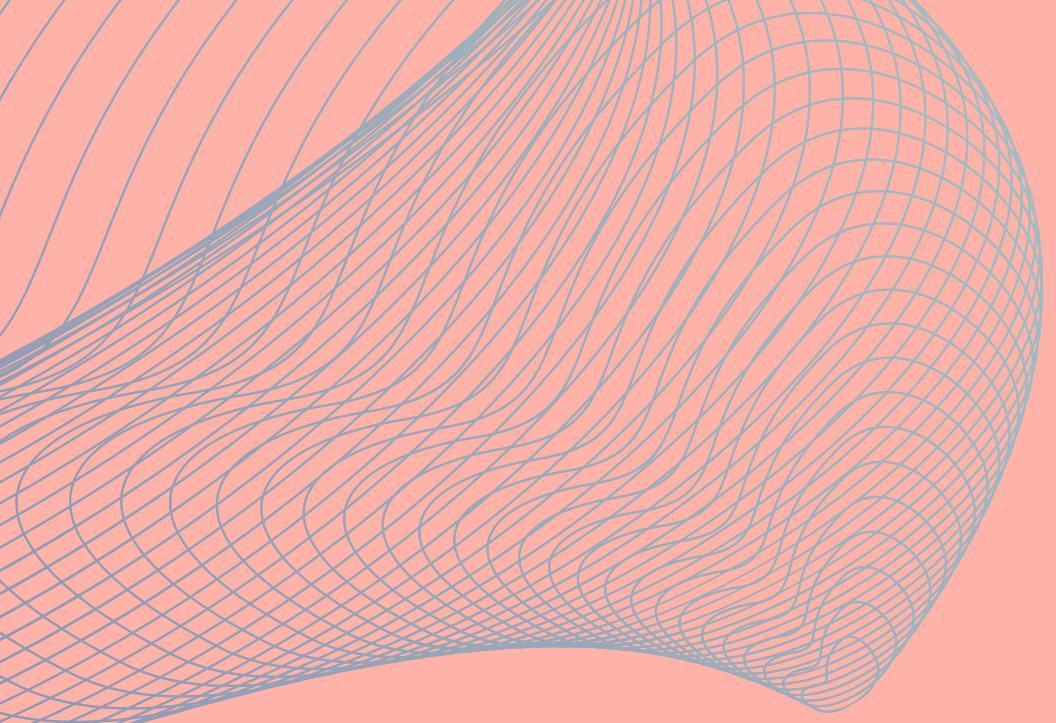
Insights :

- Every division has a product that appeared twice but with different variant in the top 3 ranks by total sold quantity.

Ad-hoc request 10

Insights :





Thank you



Dhaval Patel sir Hemanand Vadivel sir



CODE BASICS