



Consumer Goods Ad-hoc Insights



SQL Project Challenge



AGENDA

1

Background/Context

2

Getting familiar with Atliq's Business –
Their Markets and Product lines

3

Getting familiar with the input data

4

Ad-hoc requests along with the queried
results, visualizations and Insights



1

BACKGROUND/CONTEXT

Our Company

Atliq Hardwares (imaginary company) – One of the leading computer hardware producers in India.

Background

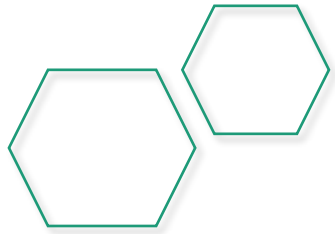
The management noticed that they do not get enough insights to make quick and smart data-informed decisions.

Problem

There are 10 ad-hoc requests for which the company needs insights.

Approach

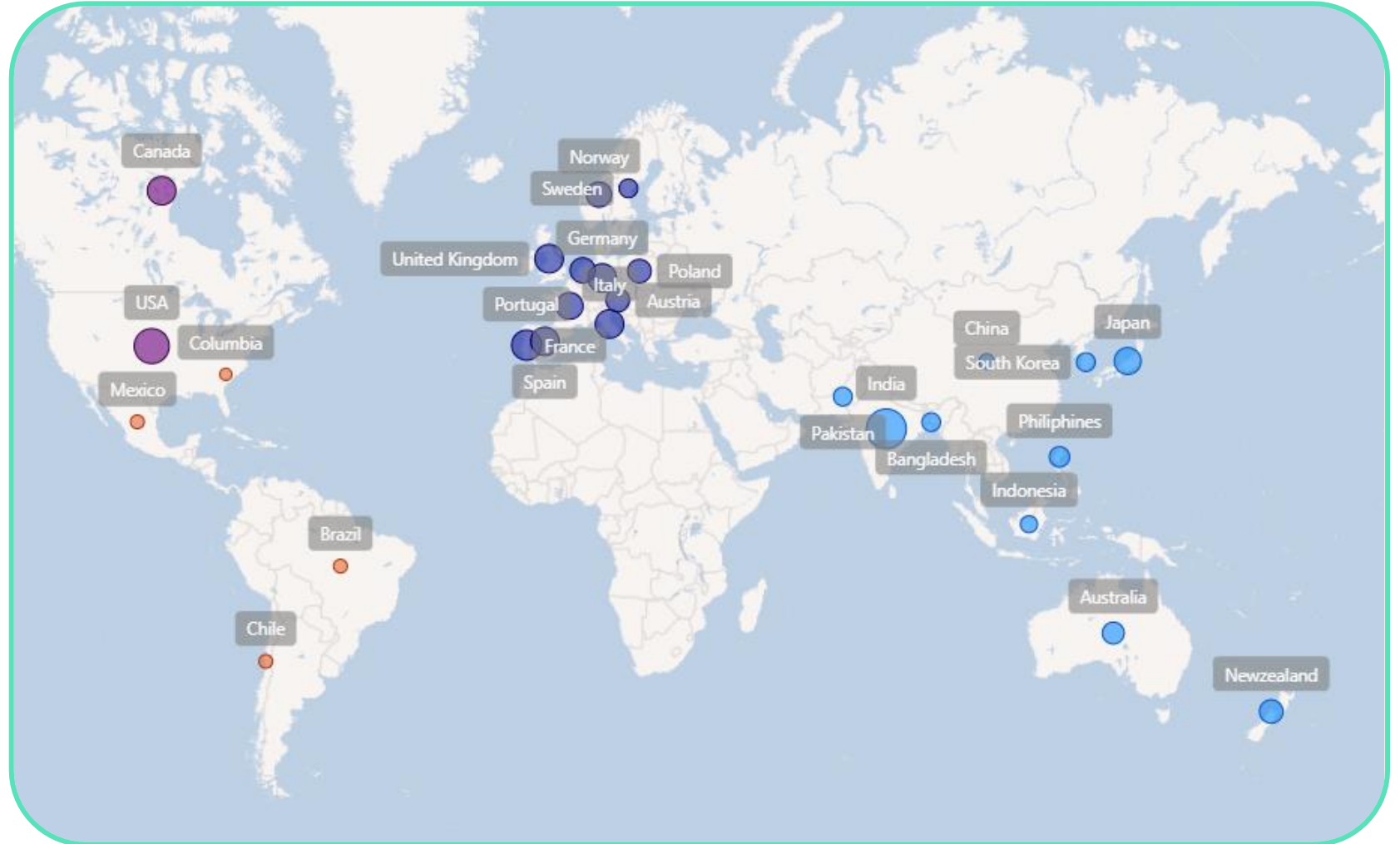
Run a SQL query to answer these requests. Convert it into visualizations and present the Insights to the top-level management.

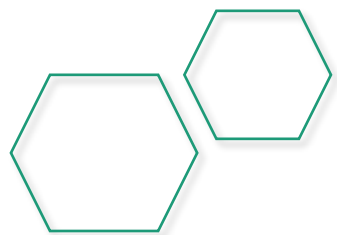


2

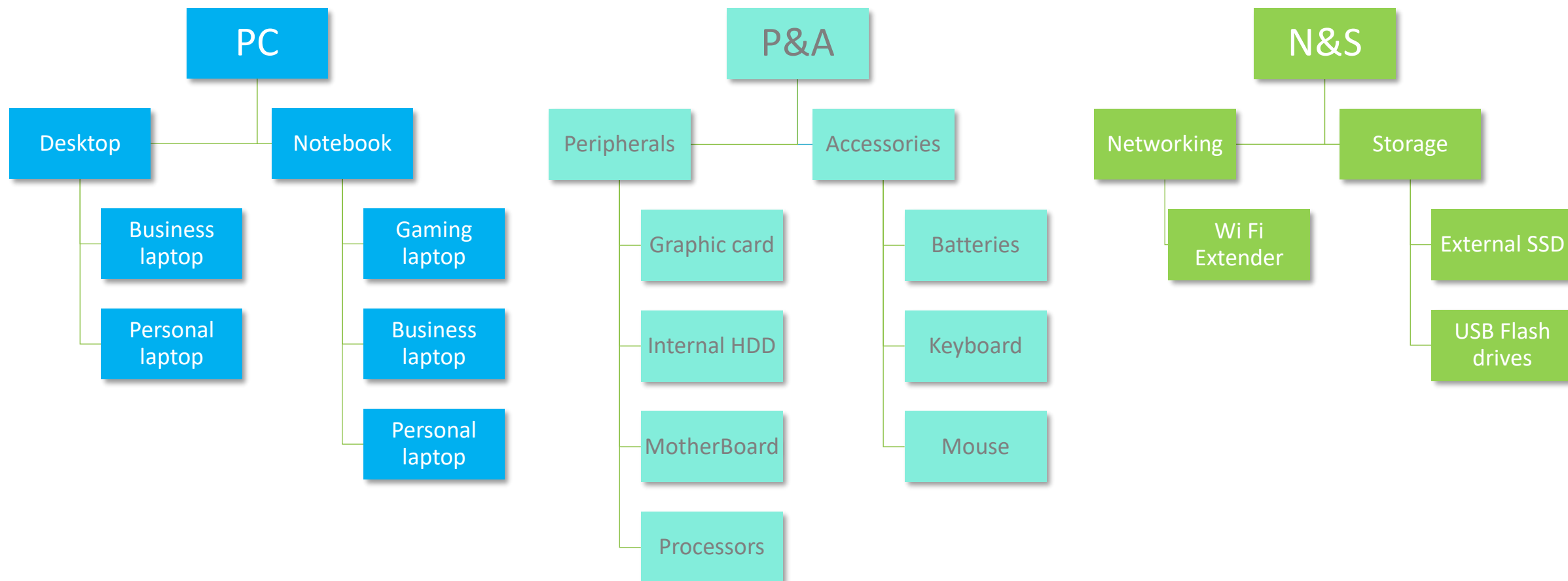
Getting familiar with Atliq's Business –Their Markets and Product lines

Atliq's Markets





Atliq's Product lines

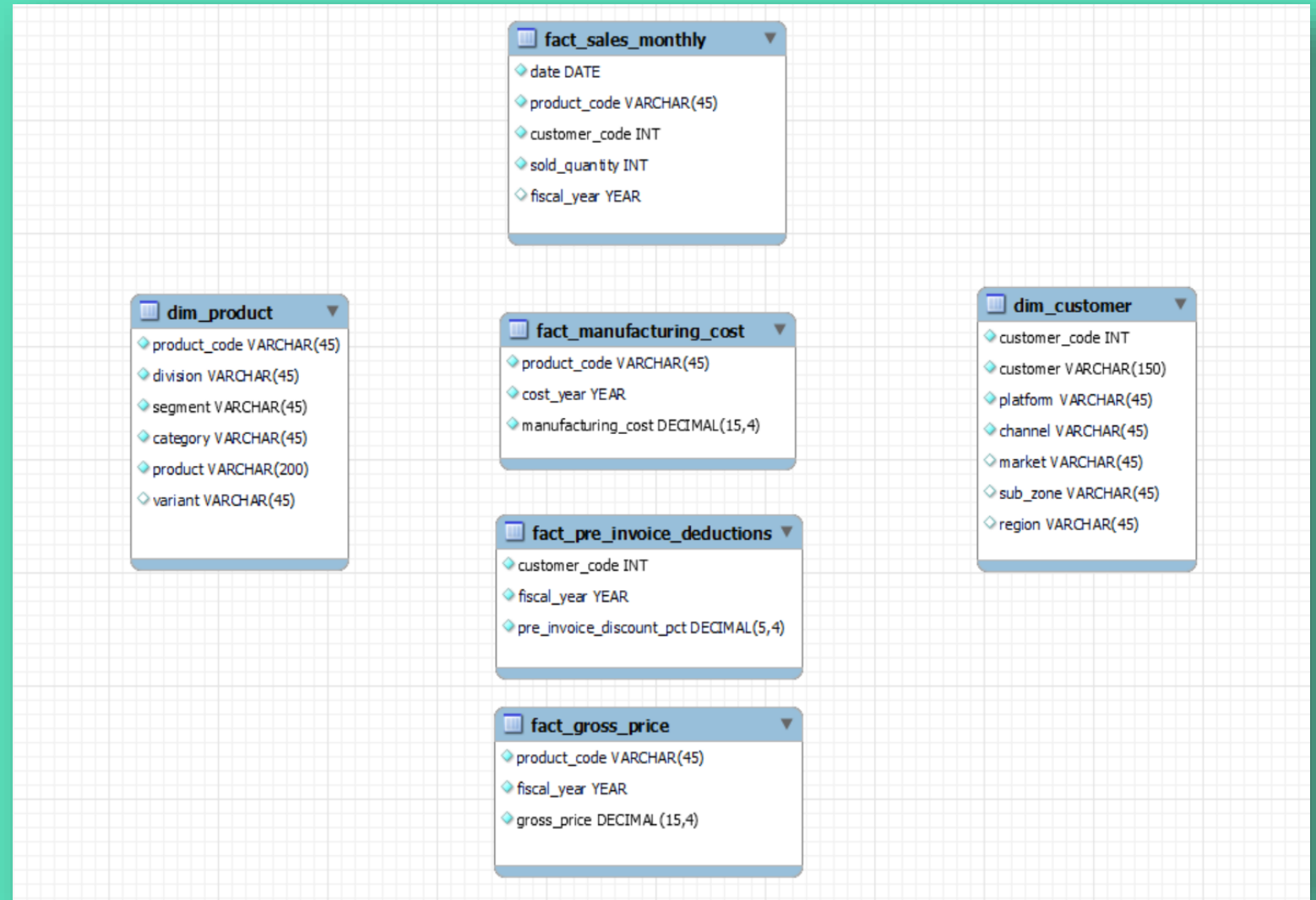




- Input data consists of sales data for FY 2020 and FY 2021, along with different other dimension tables like customer details, product details, etc.

3

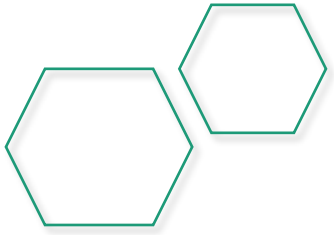
Getting familiar with the input data



4

Ad-hoc
requests,
queried results,
Insights and
visualization





REQUEST 1:

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

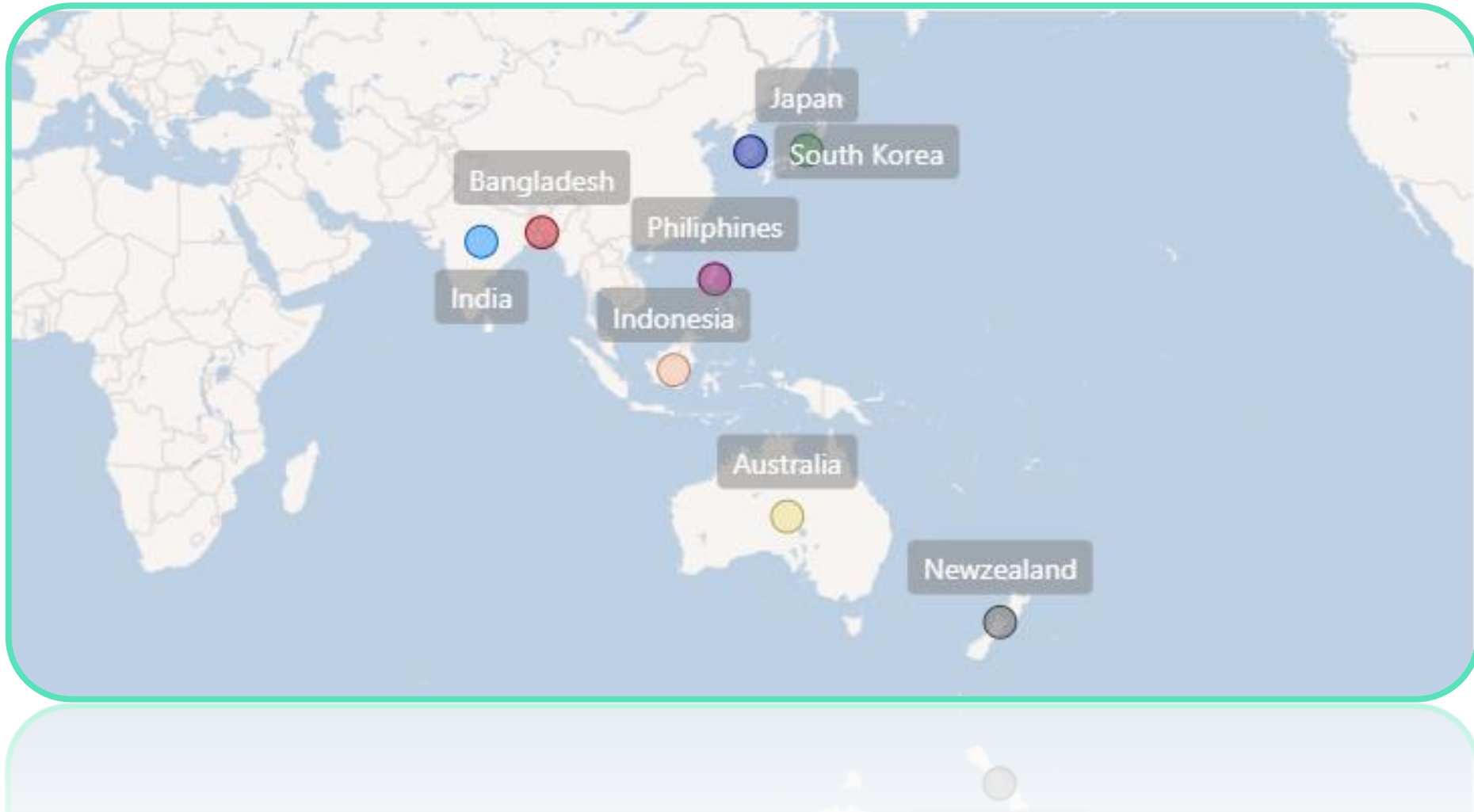
OUTPUT

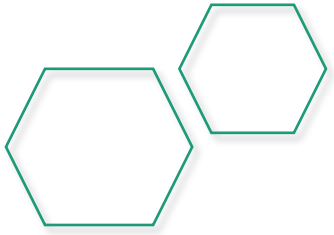
	market
▶	India
	Indonesia
	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh



Insights

In the APAC region, our Exclusive store has established its presence in 8 major markets.





REQUEST 2:

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

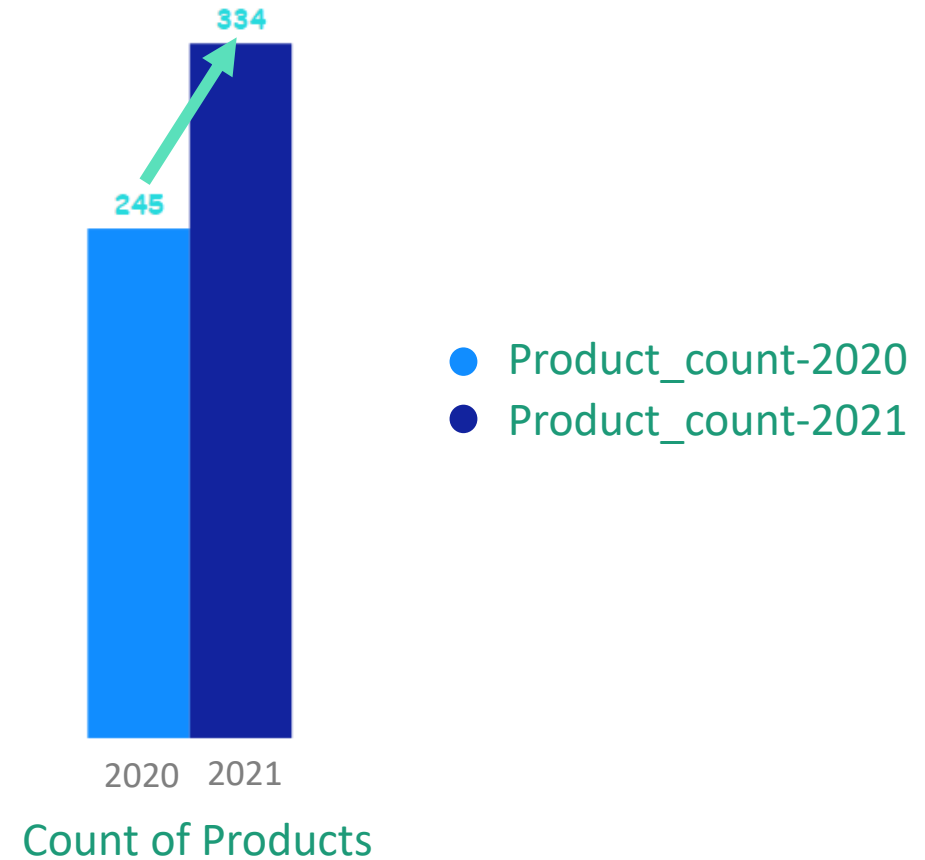
unique_products_2020
unique_products_2021
percentage_chg

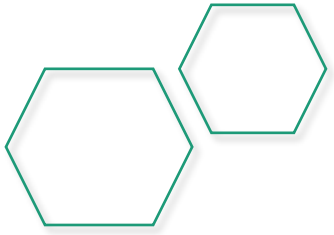
OUTPUT

	unique_products_2020	unique_products_2021	percentage_change
▶	245	334	36.33



It's a good sign that we are continuously innovating and introducing new products to the market. **In FY 2020, we had a total of 245 products, but in FY 2021, our count increased by 36% to 334 products.**





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

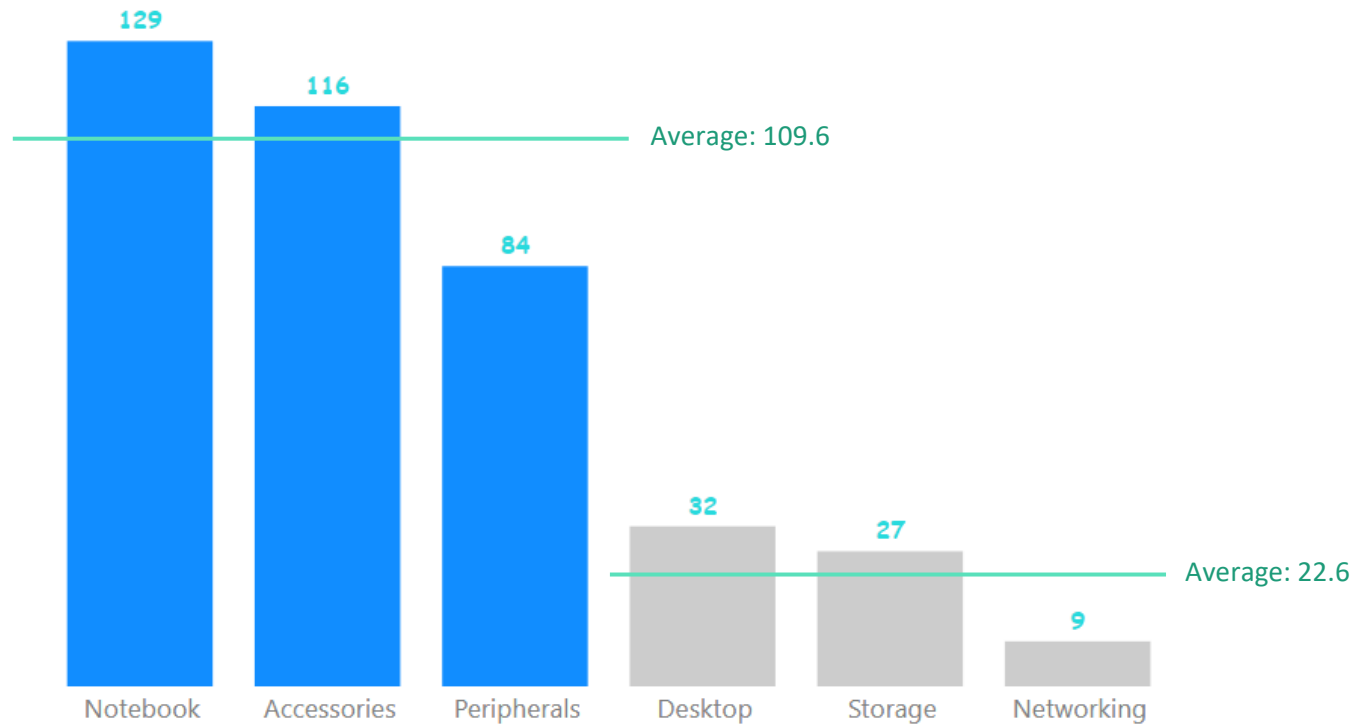
OUTPUT

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

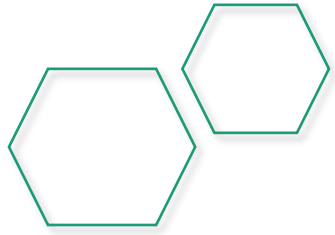


Insights

We provide a wide range of products under the segments **Notebook, Peripherals, and Accessories**, with an average of **110 products in each segment**. However we still need to diversify our production in the **Desktop, Networking, and Storage segments**, where there are just an **average of only 23 products per segment**.



How many products are there in each segments?



REQUEST 4:

Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields:

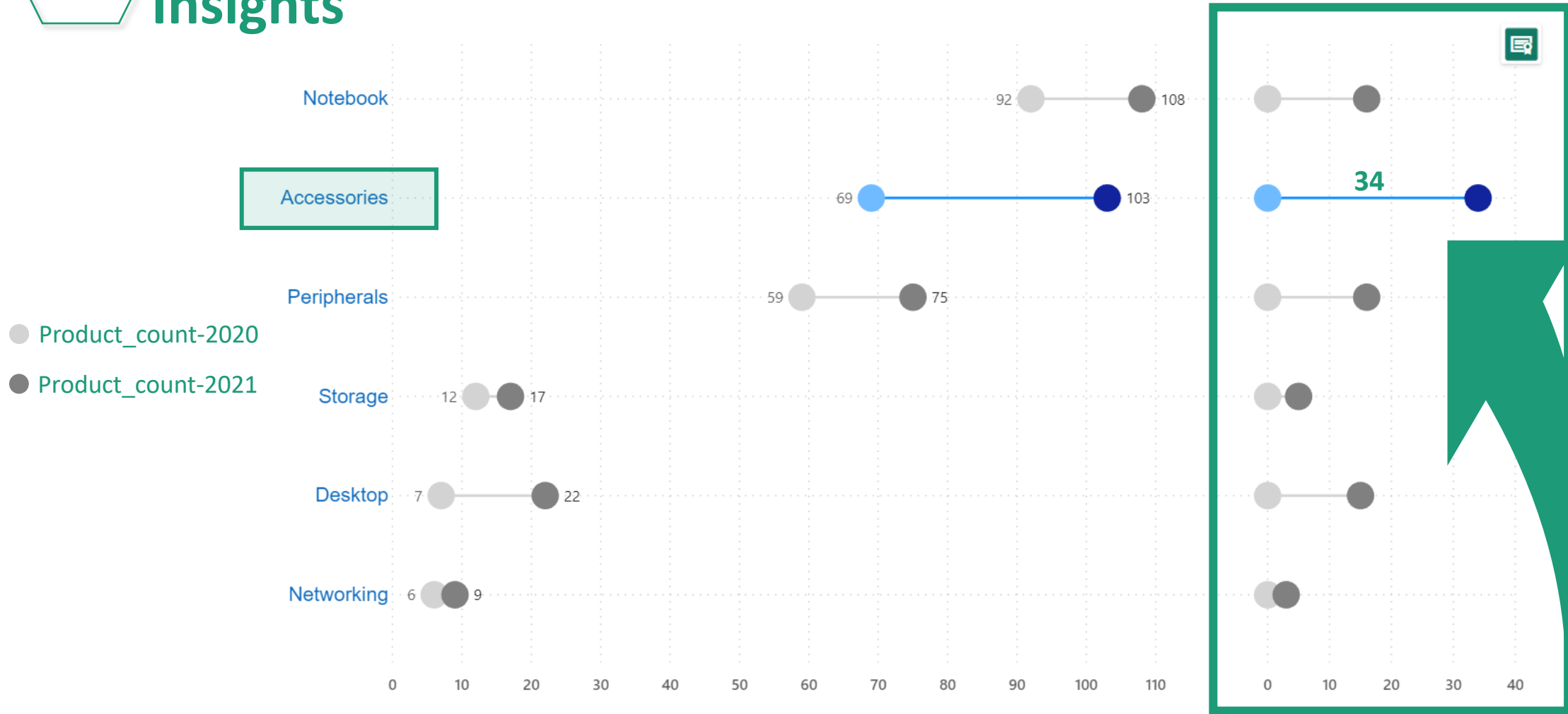
segment
product_count_2020
product_count_2021
difference

OUTPUT

	segment	product_count_2020	product_count_2021	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

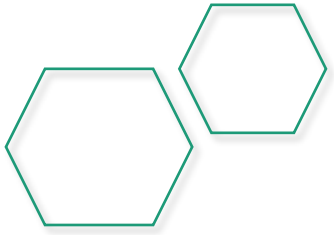


In 2021, we were mainly focusing on diversifying **our accessories segment**. We introduced **34 new products** to the market in accessories.



Comparison of Product count in 2020 vs 2021 for each of the segments

Which segment had the most increase?



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	cost_year	manufacturing_cost
▶	A6120110206	AQ HOME Allin1 Gen 2 (Plus 3)	2021	240.5364
	A2118150101	AQ Master wired x1 Ms (Standard 1)	2020	0.8920



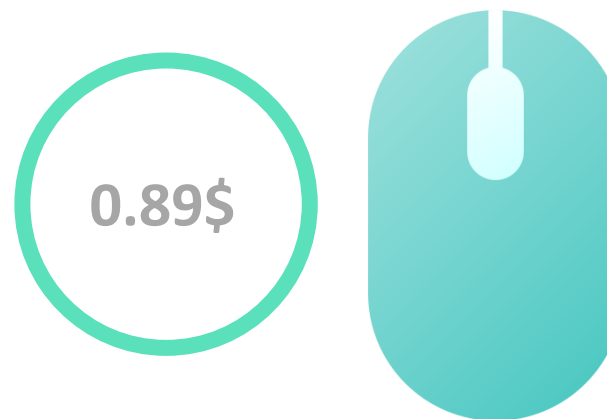
Which of our products has
the highest manufacturing cost?



AQ HOME Allin1 Gen 2 (Plus 3)

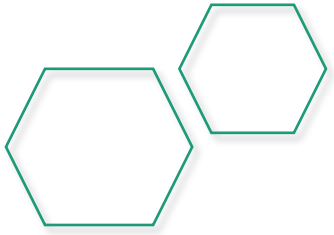
Personal Desktop

Which of our products has
the lowest manufacturing cost?



AQ Master wired x1 Ms (Standard 1)

Mouse



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:

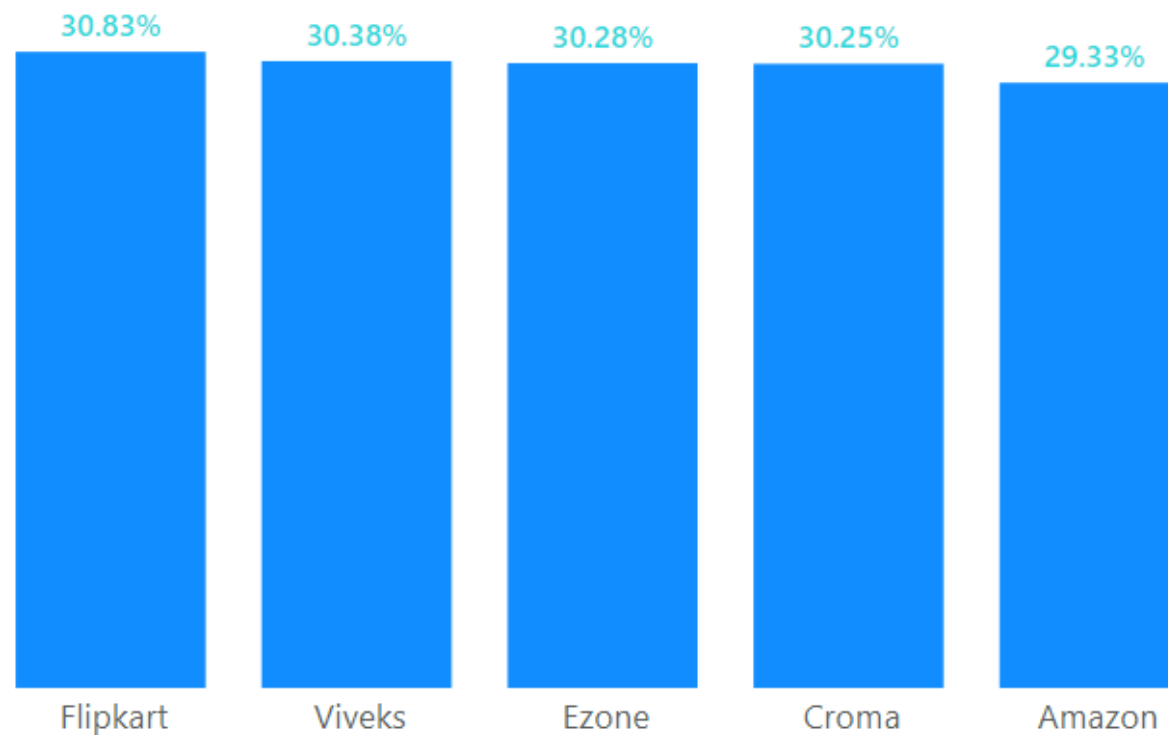
customer_code
customer
average_discount_percentage

OUTPUT

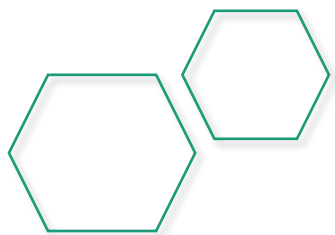
	customer_code	customer	average_discount_percentage
▶	90002009	Flipkart	0.3083
	90002006	Viveks	0.3038
	90002003	Ezone	0.3028
	90002002	Croma	0.3025
	90002016	Amazon	0.2933



In 2021, we offered nearly equal pre-invoice discount percentages to each of our top 5 customers, given that Flipkart is the most discounted customer in the Indian market, which equals **30.83%**.



Who are the top 5 customers for whom we offered the most pre-invoice discount percentage in 2021 and in the Indian market?



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

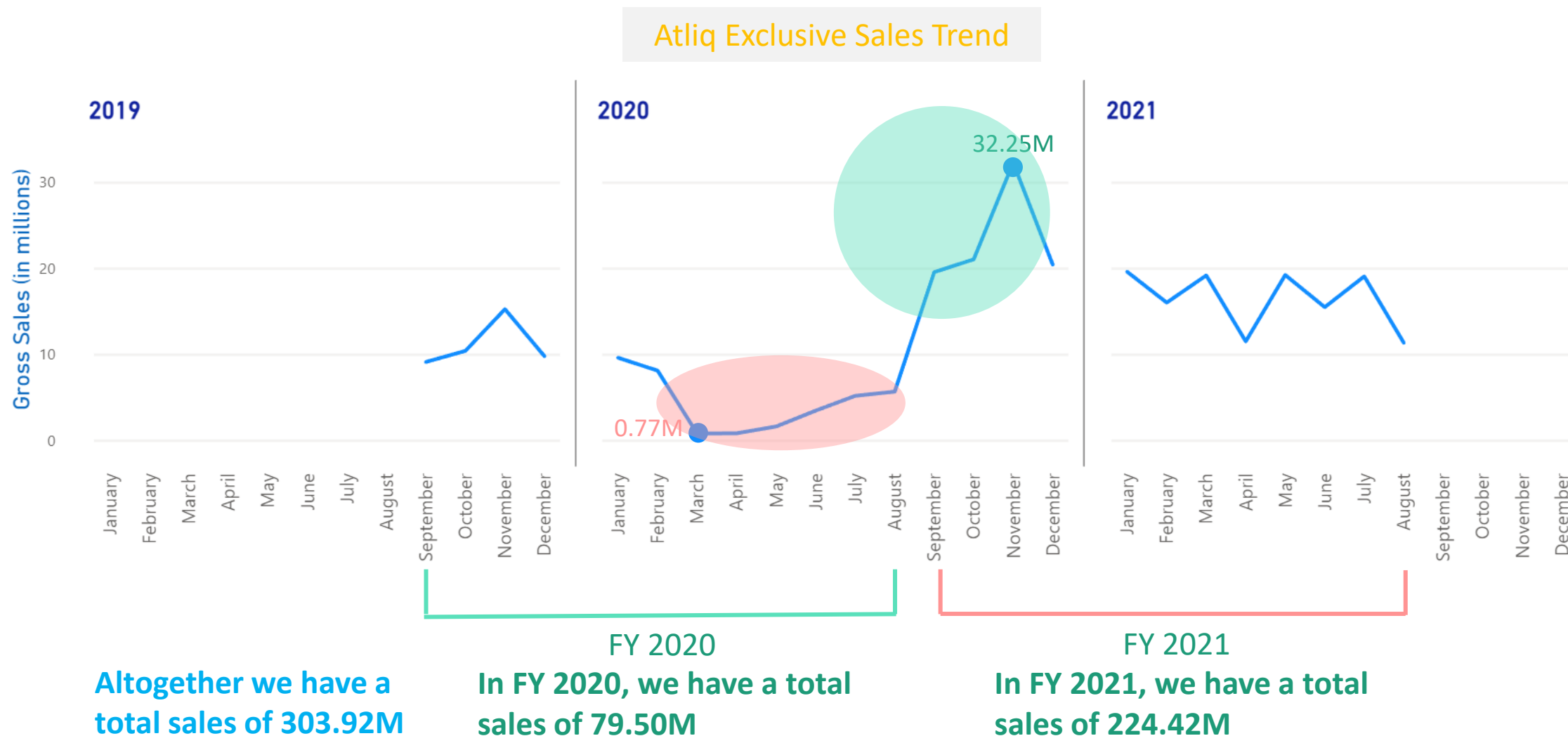
Gross sales Amount

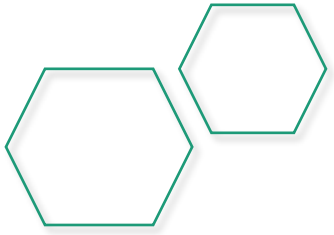
OUTPUT

	months	year	gross_sales
▶	September	2019	9.09M
	October	2019	10.38M
	November	2019	15.23M
	December	2019	9.76M
	January	2020	9.58M
	February	2020	8.08M
	March	2020	0.77M
	April	2020	0.80M
	May	2020	1.59M
	June	2020	3.43M
	July	2020	5.15M
	August	2020	5.64M
	September	2020	19.53M
	October	2020	21.02M
	November	2020	32.25M
	December	2020	20.41M
	January	2021	19.57M
	February	2021	15.99M
	March	2021	19.15M
	April	2021	11.48M
	May	2021	19.20M
	June	2021	15.46M
	July	2021	19.04M
	August	2021	11.32M



For Atliq Exclusive, **November 2020** marked the **highest sales**, and **March 2020** marked the **lowest gross sales**. It's very evident that the **lower sales between March and August** are because of **COVID-19**. However, it's a very good sign that the **sales increased quickly after August** and reached the highest level since the last two years in November.





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:

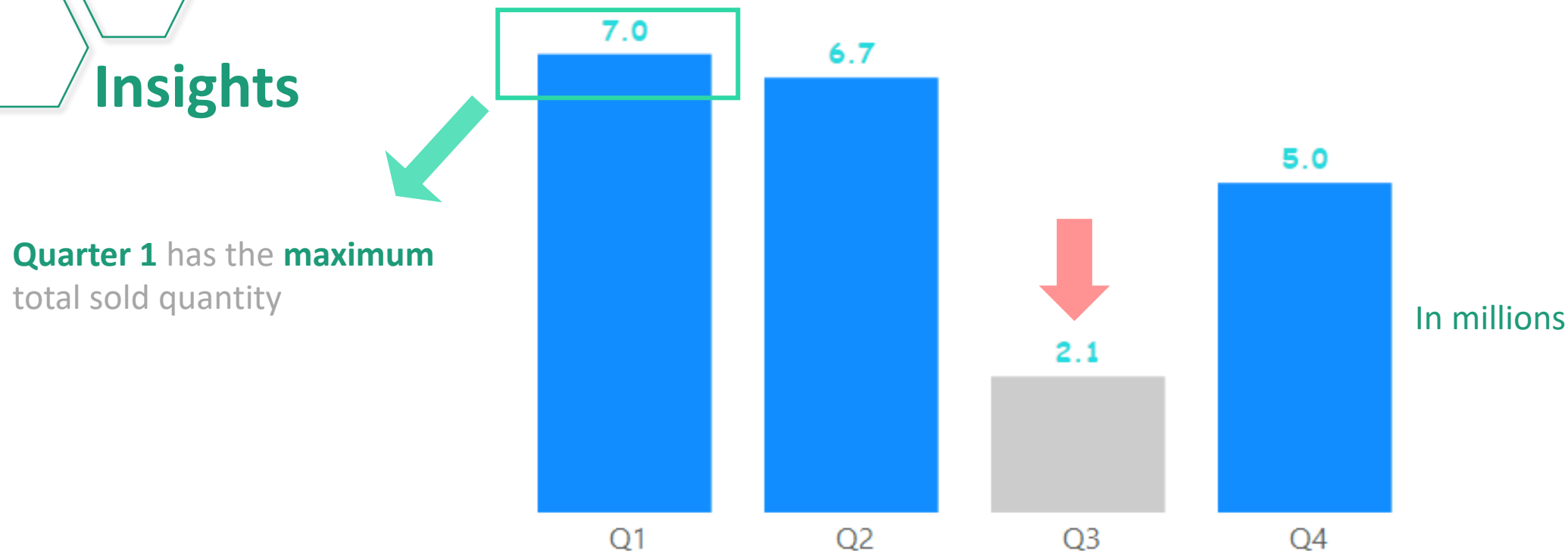
Quarter
total_sold_quantity

OUTPUT

	quarter	total_sold_quantity_in_millions
▶	Q1	7.01
	Q2	6.65
	Q4	5.04
	Q3	2.08

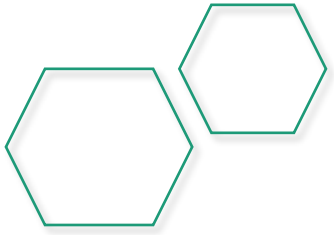


How many quantities were sold during the quarters of FY 2020?



This again complements the previous insight. That is the effect of COVID-19 on our sales. **The sold quantity decreased to 2.1 million in quarter 3 of FY 2020, which was actually March, April, and May when COVID-19 was at its peak.**

But we started recovering very early despite the continuance of the pandemic. This **early recovery during quarter 4 is probably because of the increased need for hardware like desktops and notebooks as majority of the students began or continued to do their coursework online during this time**, and there was a huge demand for computer accessories during this period.



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:

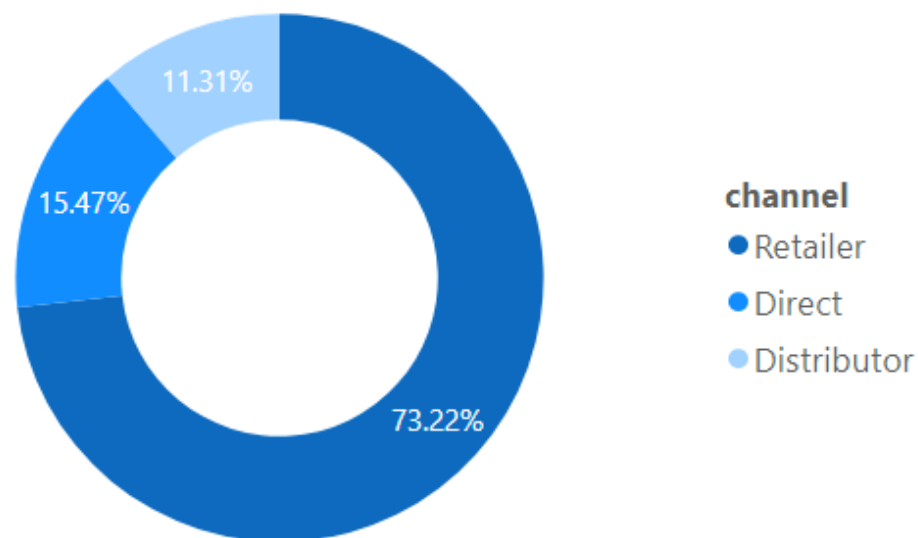
channel
gross_sales_mln
percentage

OUTPUT

	channel	gross_sales_in_millions	percentage
▶	Retailer	1924.17	73.22
	Direct	406.69	15.47
	Distributor	297.18	11.31



The majority of our sales took place **via retailers**, which is **75%** of the total sales. Only a very small percentage of our sales happened through direct and distributor channels.



In FY 2021, How are our sales distributed among the different channels through which we sell our products?



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
Product
total_sold_quantity
rank_order

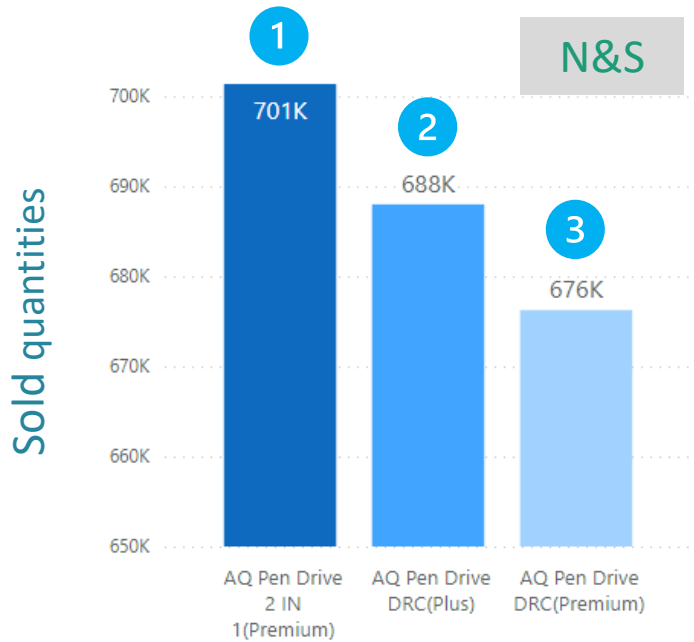
OUTPUT

	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

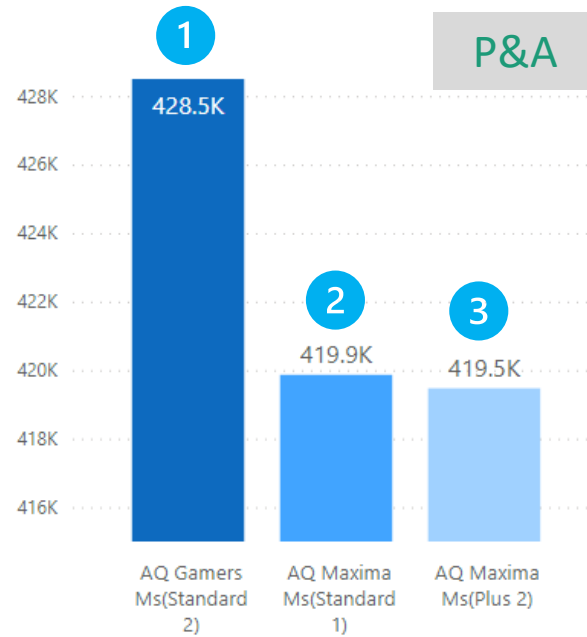


Insights

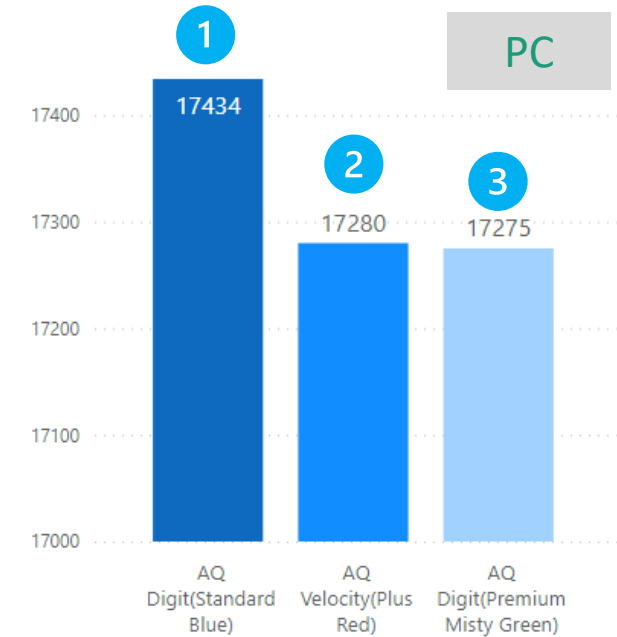
The top 3 selling products in N&S were **pen drives**, which were around **7 lakh in quantity**.



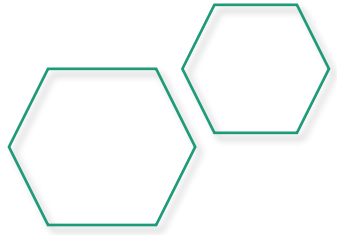
The top 3 selling products in P&A were **mouse**, which were around **4 lakh in quantity**.



The top 3 selling products in PC were **personal laptops**, which were around **17000 in quantity**.



Which are the top 3 selling products in each of Atliq's product lines in FY 2021?



END

THANK YOU!