



Ad_Hoc Insights

CONSUMER GOODS



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Project Overview

WHY?

Objective

WHAT?

Company's Details
and Market

HOW?

Data, Requests
and Tools

Project Objective

- **Atliq Hardware**, a leading computer hardware manufacturer in India, is expanding its operations globally.
- Until now, the company relied on **Excel** for decision-making, which is no longer adequate for managing multi-national operations.
- With international growth, the management identified the need for strong, **data-driven insights** to support strategic decisions across new branches.
- To meet this demand, the company intends to **strengthen its data analytics team** by hiring junior data analysts capable of processing and interpreting data effectively.
- The company seeks insights for **10 ad hoc** requests.

Company Details

Atliq Hardware is a consumer electronics company that manufactures and sells a wide range of hardware products to various customers.

To streamline operations and monitor performance more effectively, Atliq organizes its product offerings into three major divisions:

- N & S (Network & Storage): Includes drivers, Wi-Fi extenders, and related products.
- P & A (Peripherals & Accessories): Covers items such as mice, batteries, graphic cards, and more.
- PC (Personal Computers): Focuses on desktops and laptops.

This structure enables the company to analyze sales patterns, track gross margins, and make informed, data-driven decisions for each product category.

FISCAL YEAR

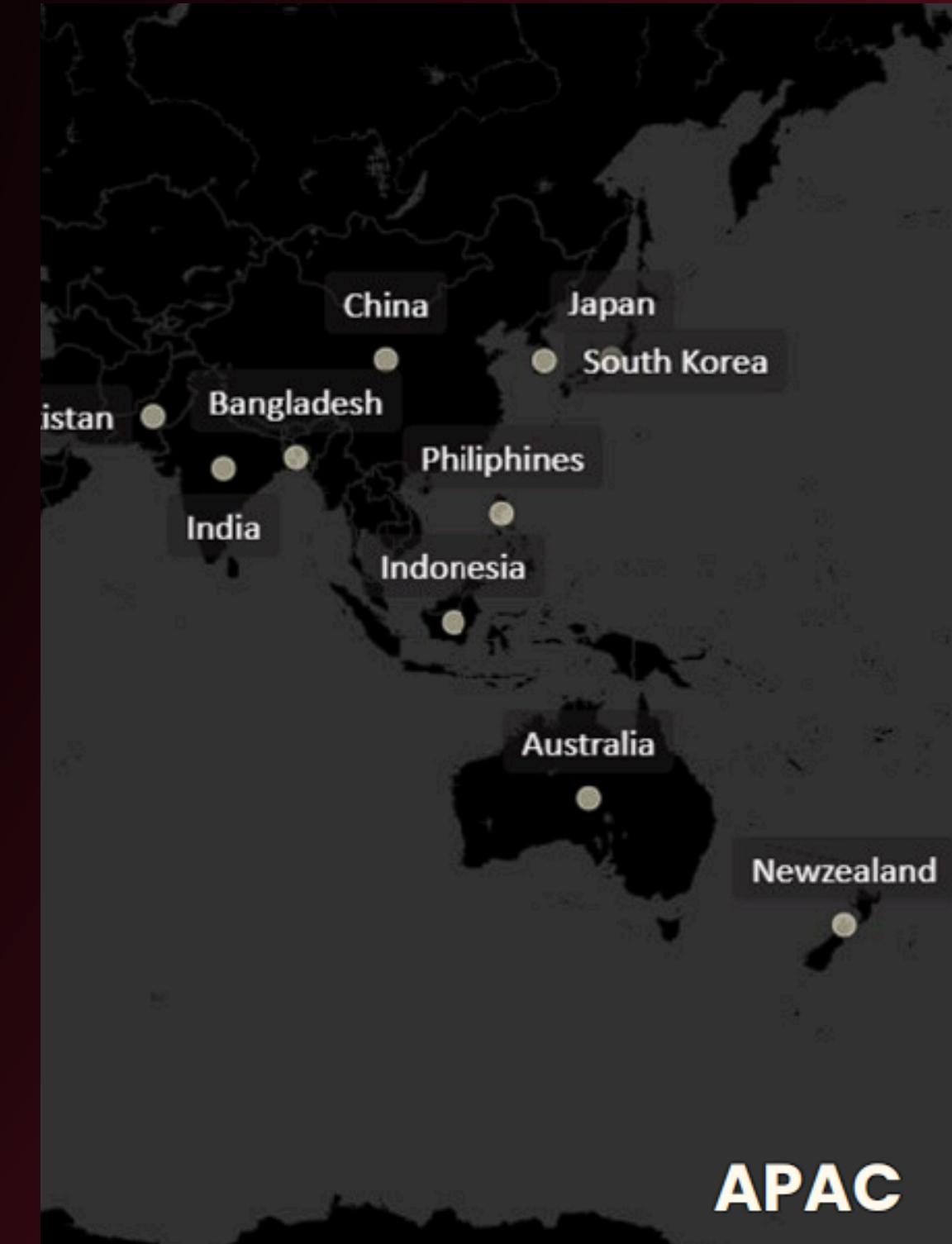
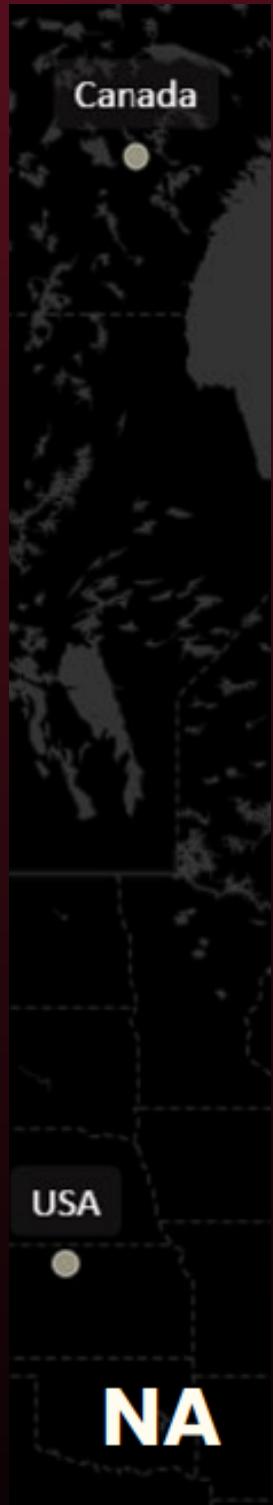
SEPTEMBER 2019 - AUGUST 2020

FY 2020

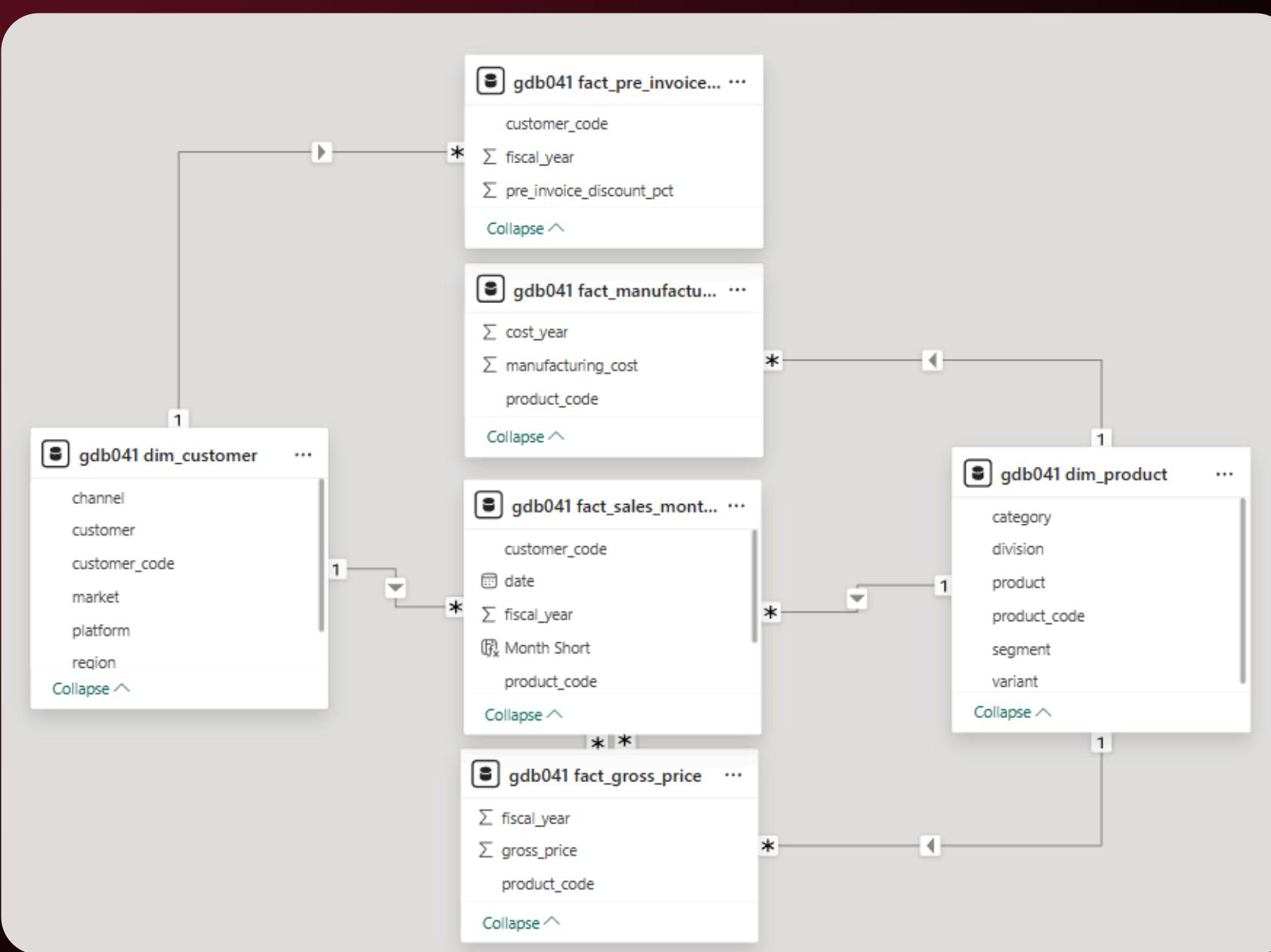
SEPTEMBER 2020 - AUGUST 2021

FY 2021

Company Market



Data, Requests, and Tools



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
- 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

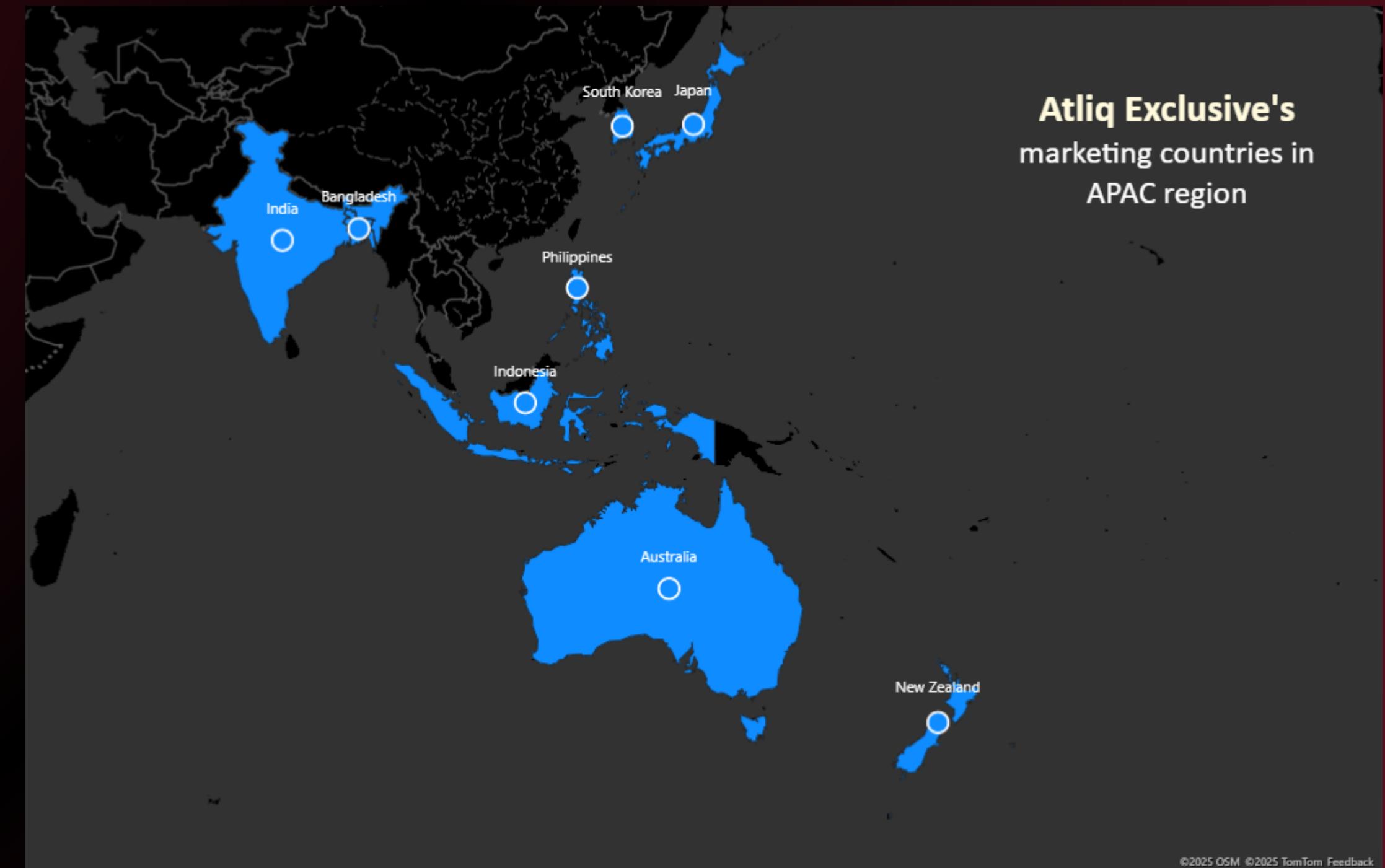


Power BI

For Analysis and Visualization

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
New Zealand
Bangladesh



AtliQ Exclusive operates in eight countries within 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

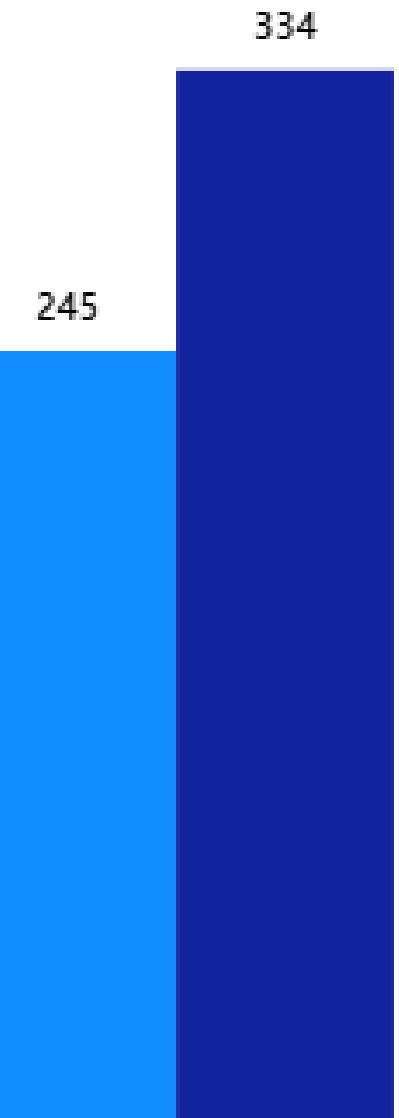
	unique_product_2020	unique_product_2021	percentage_chg
▶	245	334	36.33



Unique Products 2020 vs Unique Products 2021

Unique Products in 2020-21

Percentage Change : 36.33%



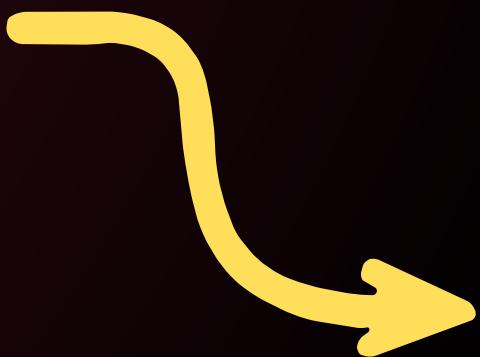
Insights:

The count of unique products increased from 245 in 2020 to 334 in 2021, reflecting a growth of 36.33%.

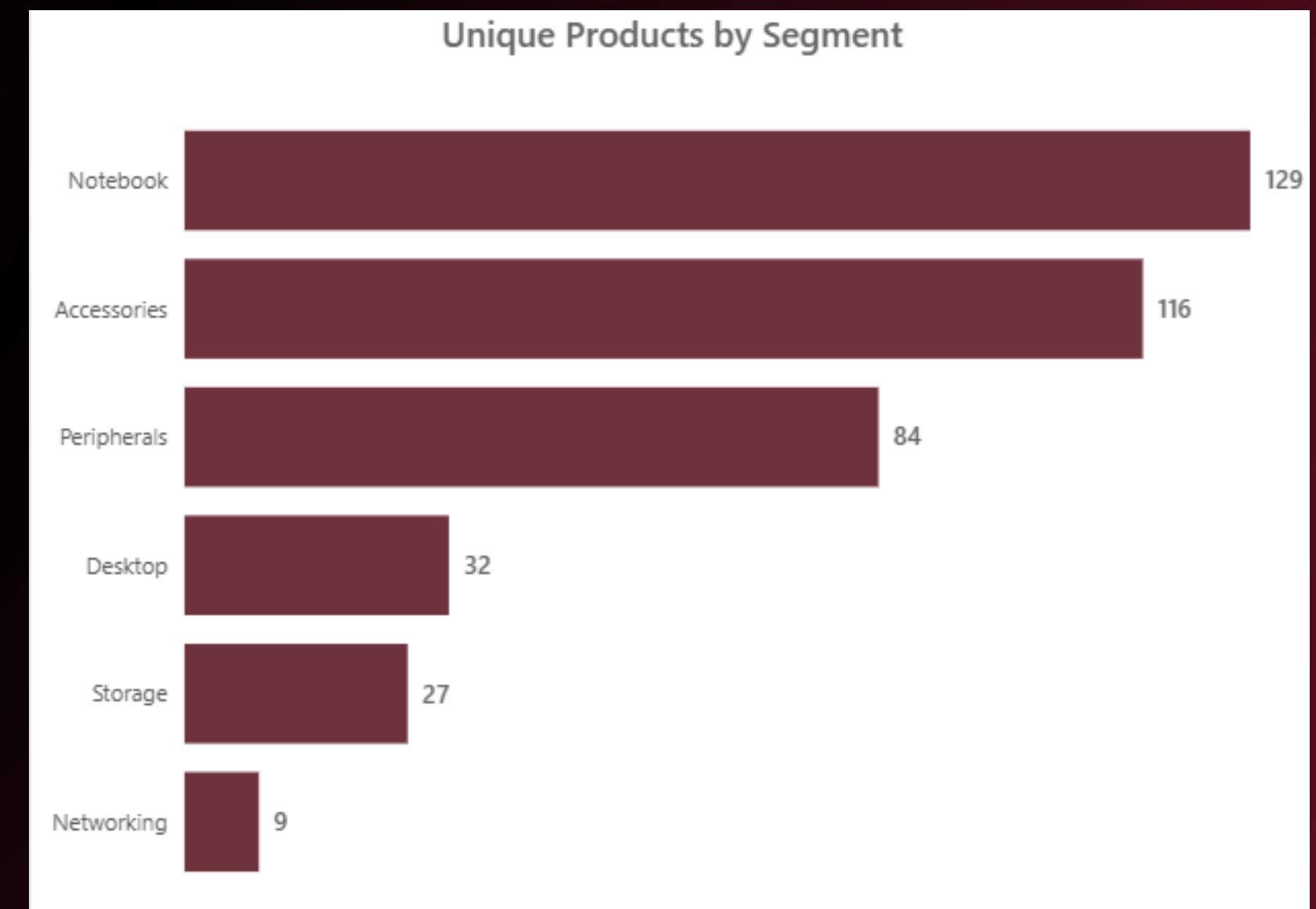
● Unique Products 2020 ● Unique Products 2021

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



Unique product counts for each segment



Insights:

Notebooks, accessories, and peripherals constitute 83% of the total manufactured product.

Networking has the smallest product count, indicating limited focus.

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	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



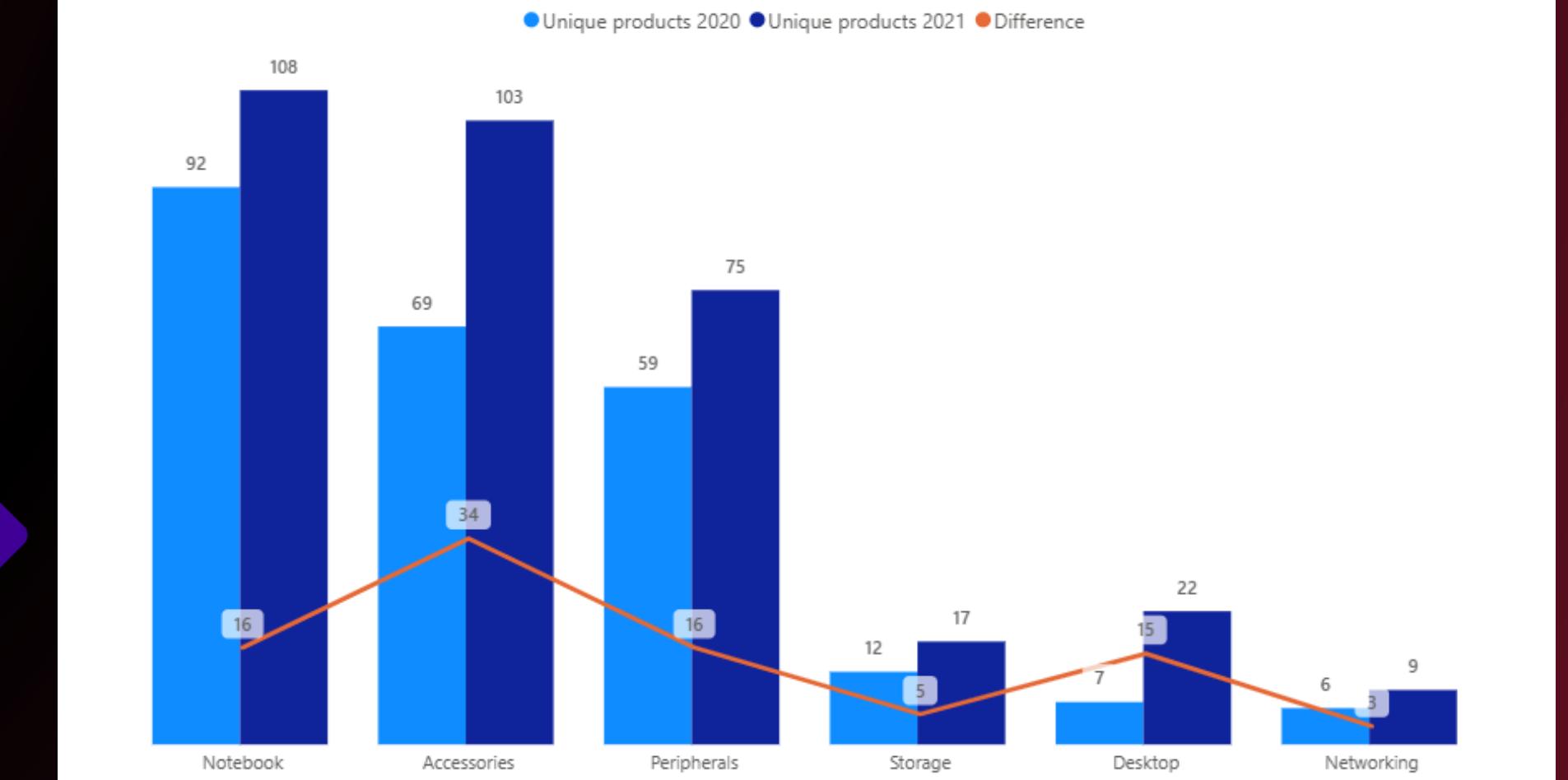
Insights:

Accessories saw the highest growth with 34 new products in 2021.

Notebook and Peripherals also saw significant growth of 16 products each.

Storage and networking are experiencing slower production growth than other segments.

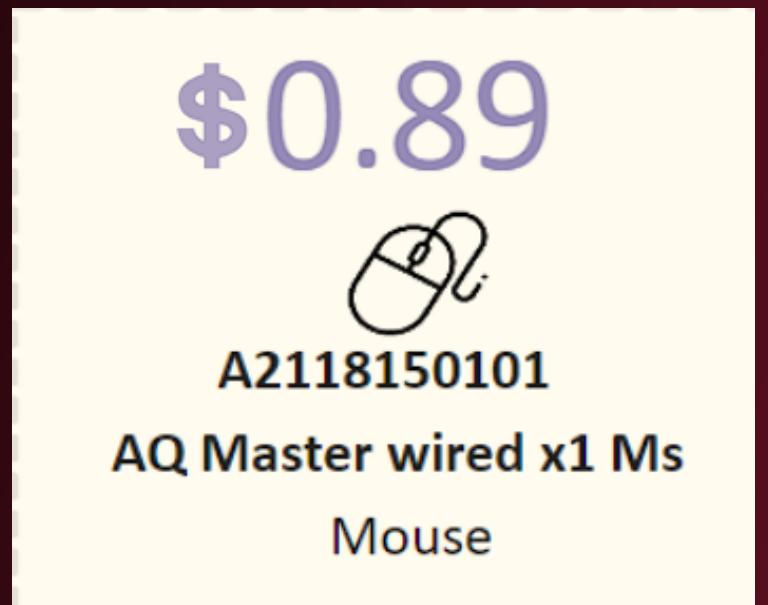
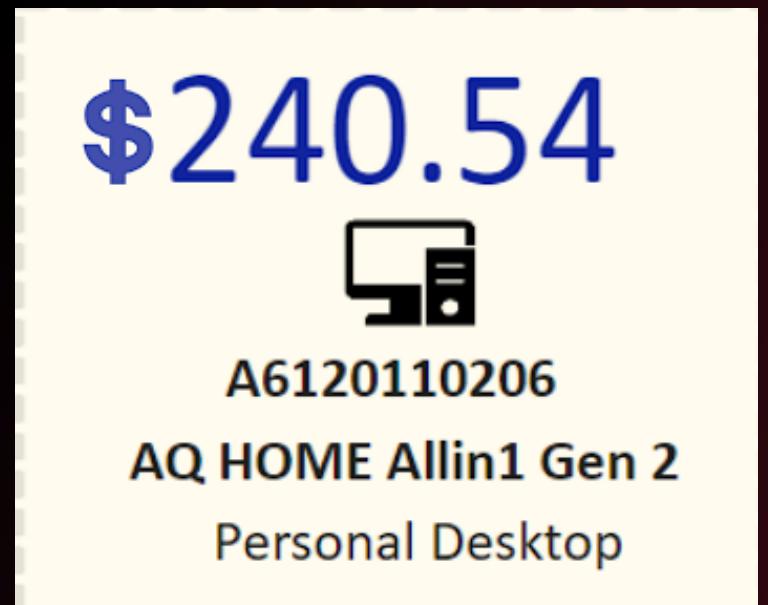
Unique product difference per segment from 2020 to 2021



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	240.5364
	A2118150101	AQ Master wired x1 Ms	0.8920

Products Having **highest** and **lowest** manufacturing costs



Insights:

Mouse: AQ Master Wired x1 Ms (Variant : Standard 1) has the lowest manufacturing costs.

Personal Desktop: AQ Home Allin1 Gen 2 (Variant: Plus 3) has the highest manufacturing costs.

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

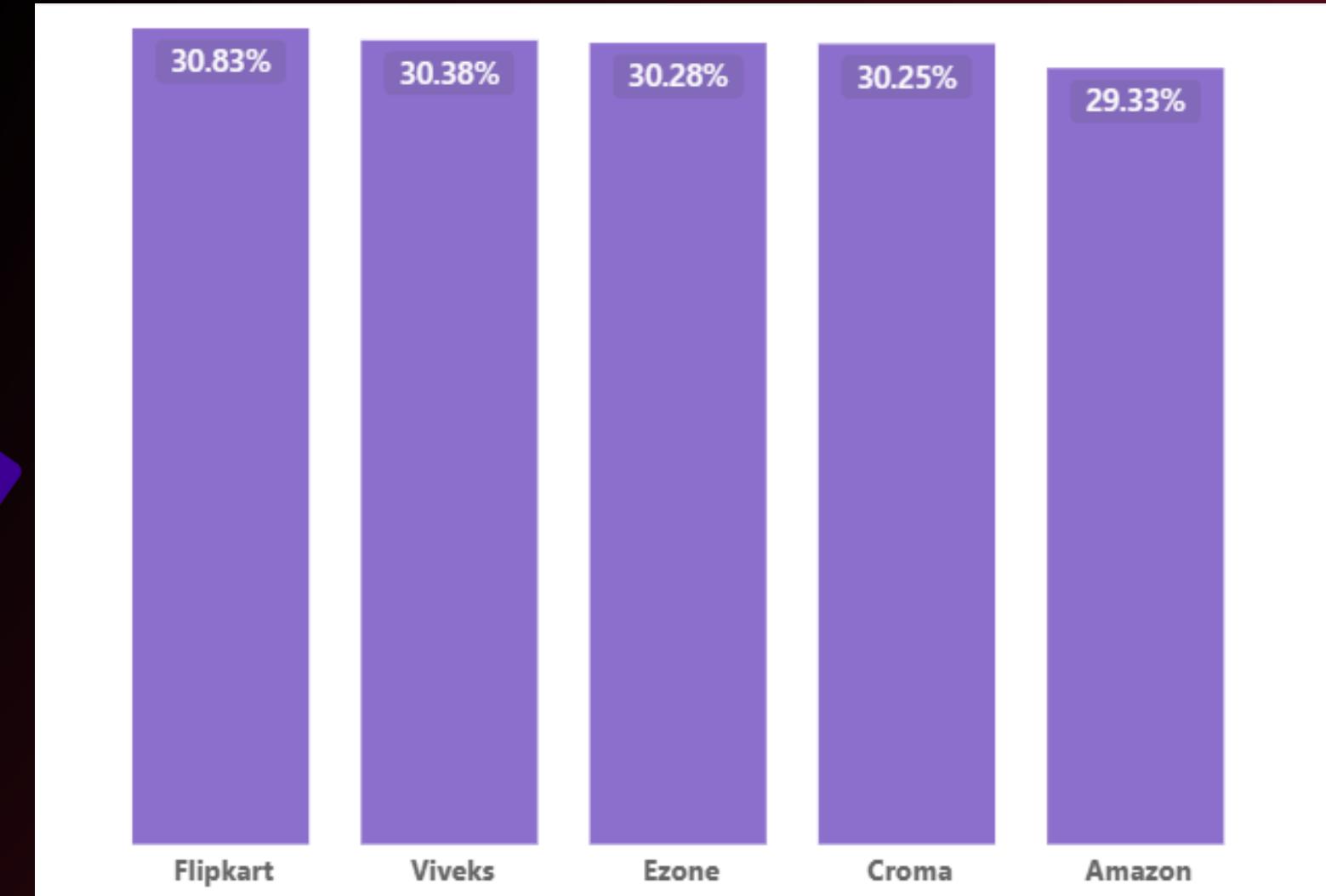
Insights:

The largest average pre-invoice discount was given to Flipkart(30.83%).

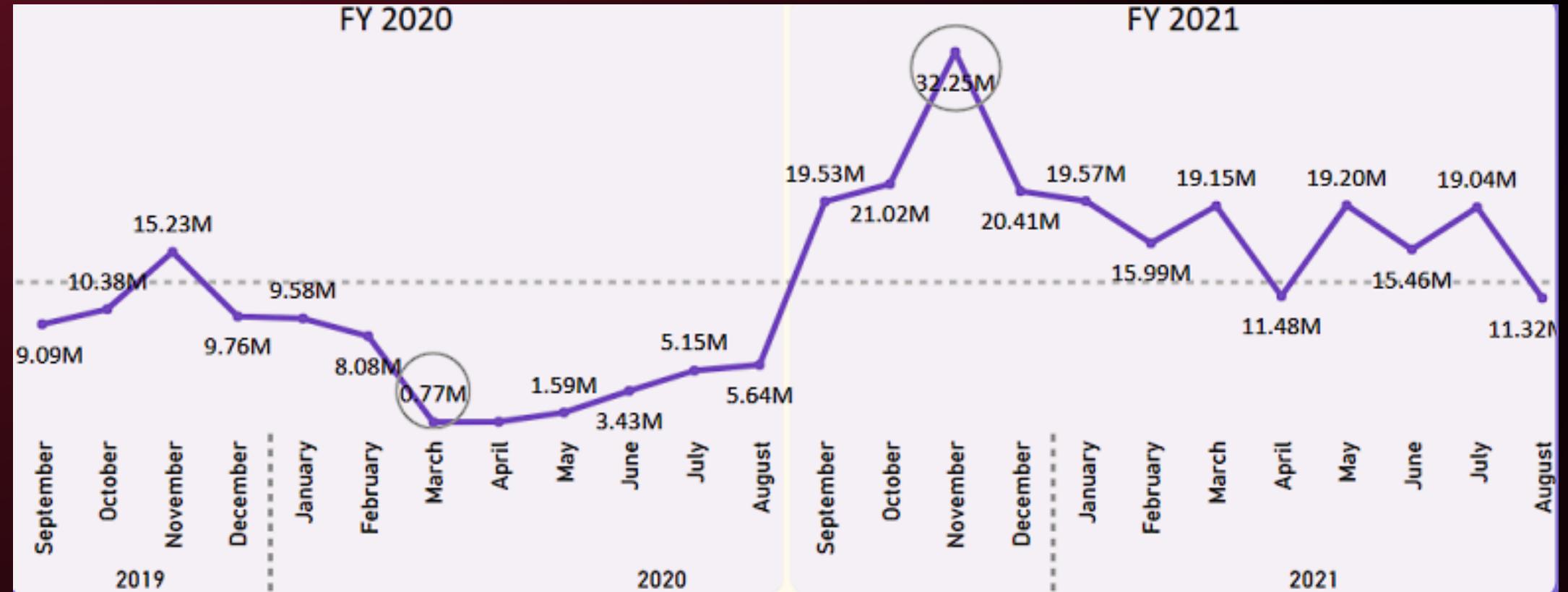
The second highest average pre-invoice discount was given to Viveks(30.38%).

The least average pre-invoice discount was given to Amazon (29.33).

Top 5 Indian customers with highest average discount percentage 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



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

FY 2020
79.5M

FY 2021
224.4M

Insights:

November 2020 marked the highest sale and March 2020 marked the lowest gross sales.

March, April, May recorded the lowest sales in 2020, likely due to the COVID-19 pandemic

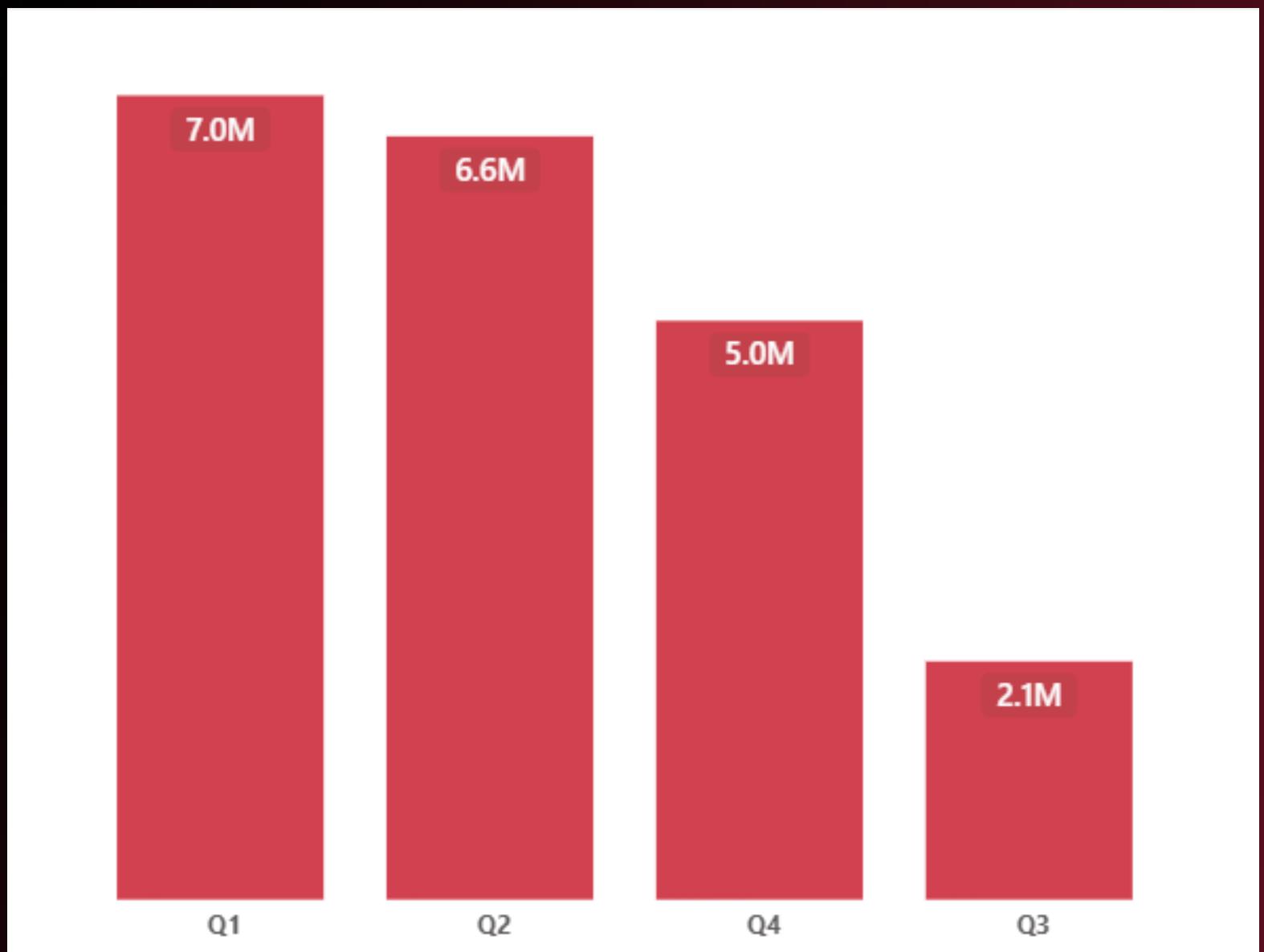
73.8% of the total Gross sales figure is in FY 2021

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



Total sold quantity in FY 2020 by Quarter



Insights:

Quarter 1 of FY2020 saw the most units sold overall, while Quarter 3 had the fewest.

Quarter 1 accounts for approximately 34% of the total sold quantity for FY2020

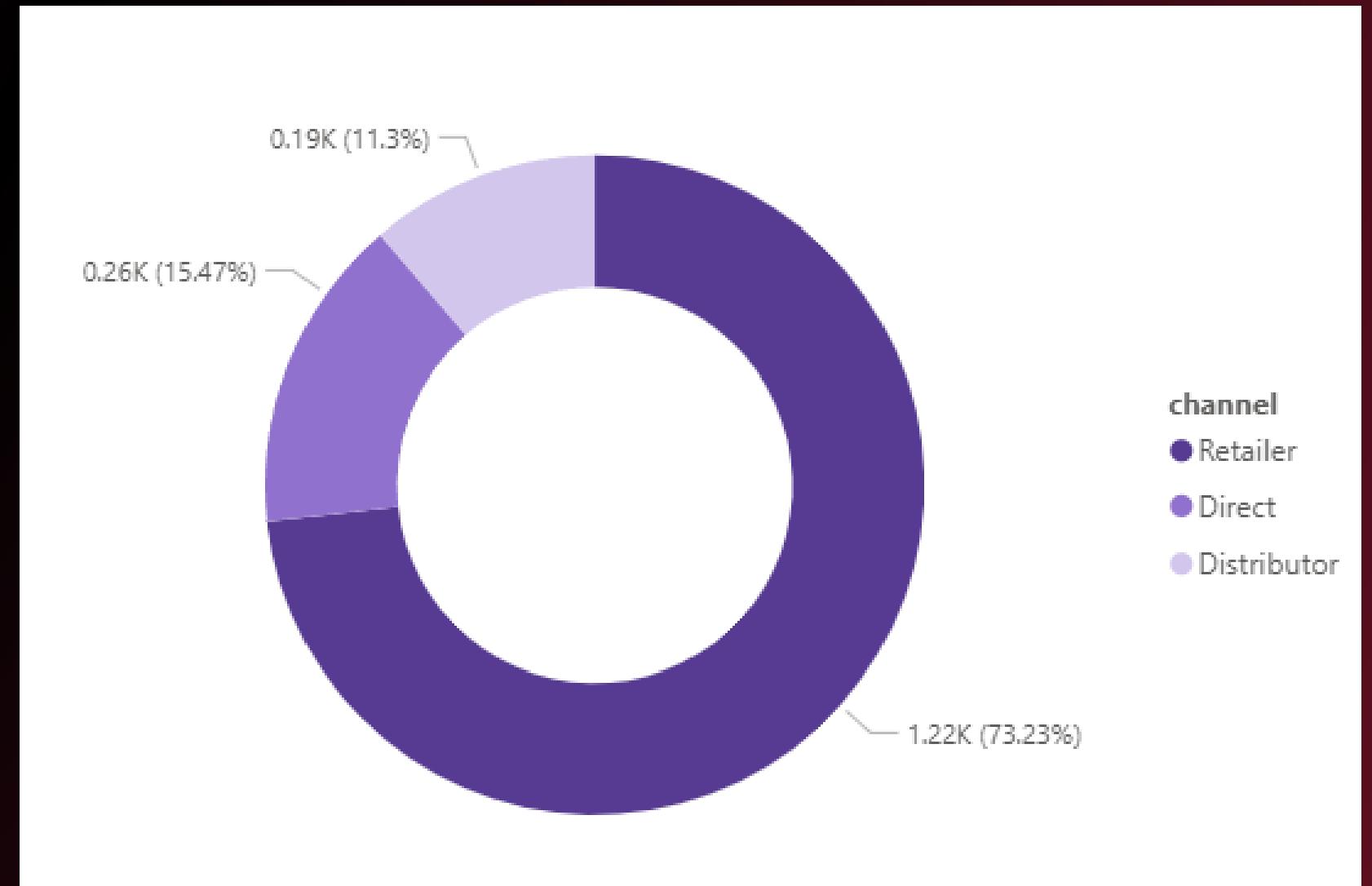
9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields, channel, gross_sales_mln, percentage

	channel	gross_sales_mln	percentage
▶	Retailer	1219.08	73.23
	Direct	257.53	15.47
	Distributor	188.03	11.30

Insights:

Retailer Channel Dominated with 73.23% of total gross sales (~1219.08M)

Gross sales and contribution percentages by Channels for FY 2021



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	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

Insights:

The top-selling product in the N & S category were Pendrives

In the P & A category, the topselling product was the mouse

In the PC category, the highest-selling product was the personal laptop



Thankyou
