



CONSUMER GOODS

AD-HOC INSIGHTS

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#codebasicsresumeprojectchallenge

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Introduction

Atliq Hardwares (an imaginary company) is one of the leading computer hardware manufacturers in India, with a strong presence in other countries as well.

However, management noticed that they are not getting enough insights to make quick and informed data-driven decisions. They want to add several junior data analysts to their data analytics team. Tony Sharma, their data analytics director, desired to hire someone with both technical and soft skills. As a result, he decided to hold a SQL challenge to help him understand both skills.

Atliq's Market



Ad-hoc Analysis

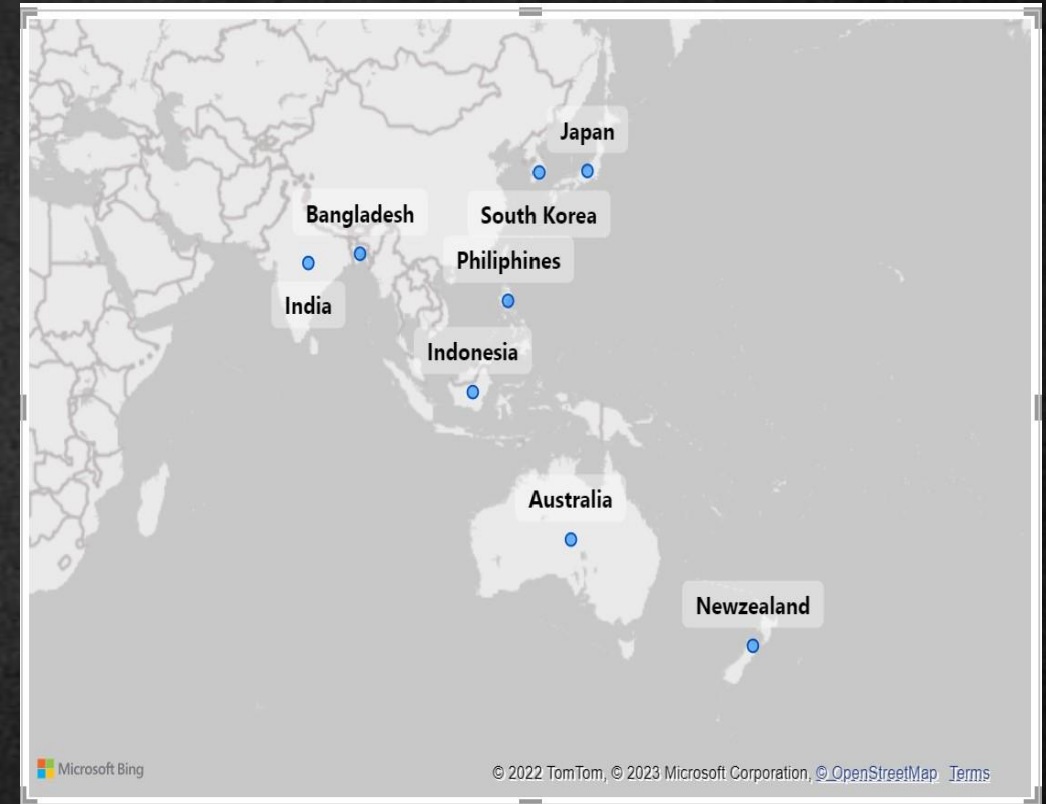
Request 1

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

Output:

	market
▶	Australia
	Bangladesh
	India
	Indonesia
	Japan
	Newzealand
	Philiphines
	South Korea

Visual



Insight

Out of the 27 Markets, Atliq Exclusive has established its presence in 8 major markets in the APAC region

Ad-hoc Analysis

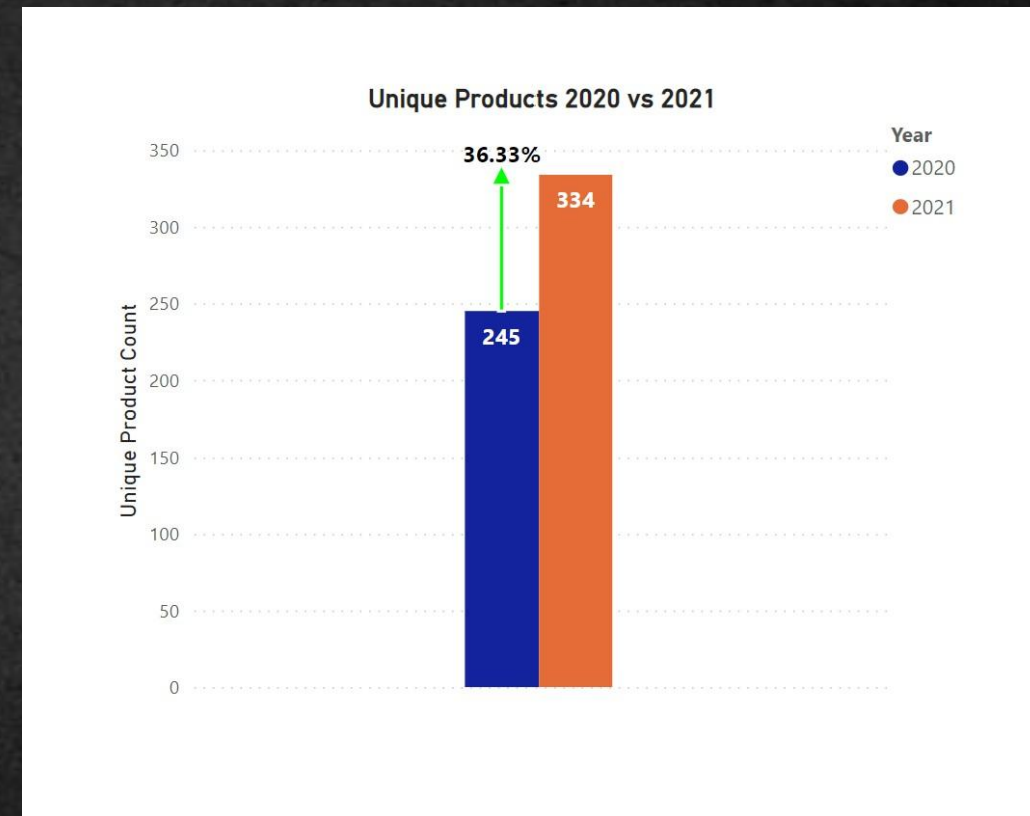
Request 2

What is the percentage of unique product increase in 2021 vs. 2020?

Output:

	unique_products_2020	unique_products_2021	percentage_chg
►	245	334	36.33

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Insight

Atliq produced **89 unique products** in FY 2021, representing a **36%** increase from **FY 2020**, which indicates the company's ability to adapt to changes in the market and respond to emerging trends, which can be an important factor for long-term success.

Ad-hoc Analysis

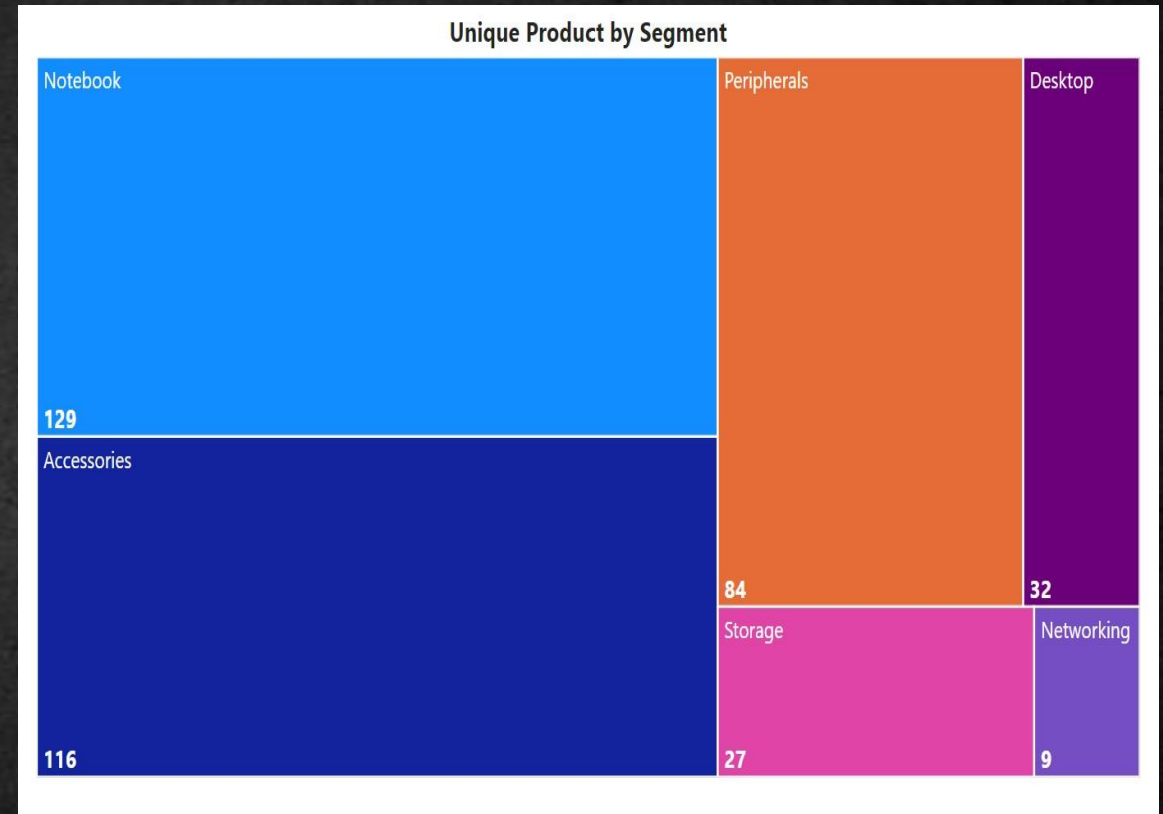
Request 3

Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

Output:

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

Visual



Insight

Among Atliq's **six product segments**, **Notebook** segment had the most unique products, while **Networking, Desktop, and Storage** had the least.

The reason behind the high number of unique products in the **Notebook & Accesories** segment could be:

- Technological advancements.
- Competitive nature of the market.

The reason behind the low number of unique products in the **Network & Storage** segment could be:

- Interoperability with different devices, so no need for multiple unique versions.

Ad-hoc Analysis

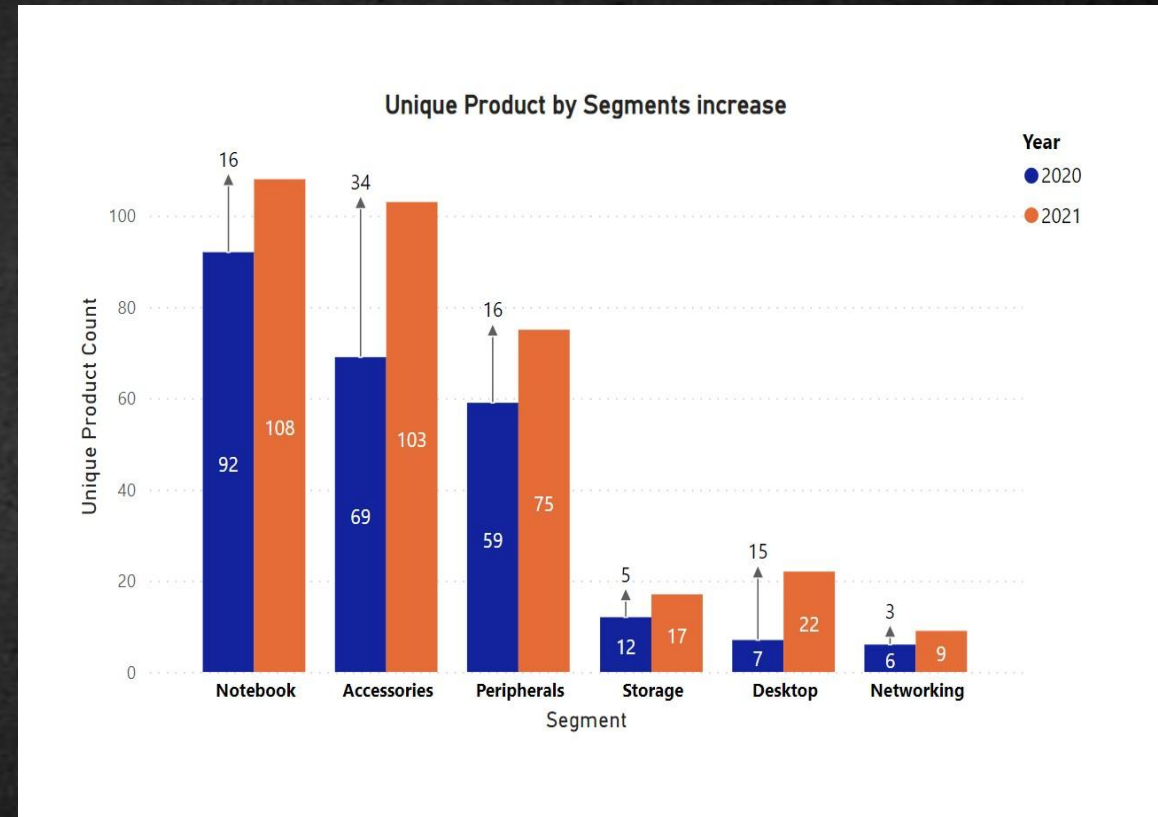
Request 4

Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

Output:

	segment	unique_products_2020	unique_products_2021	deference
►	Accessories	69	103	34
	Notebook	92	108	16
	Peripherals	59	75	16
	Desktop	7	22	15
	Storage	12	17	5
	Networking	6	9	3

Visual



Insight

Among Atliq's **six product segments**, the segment with the highest rise in unique products between 2020 and 2021 is **Accessories**. With a difference of 34 between 2020 and 2021

Ad-hoc Analysis

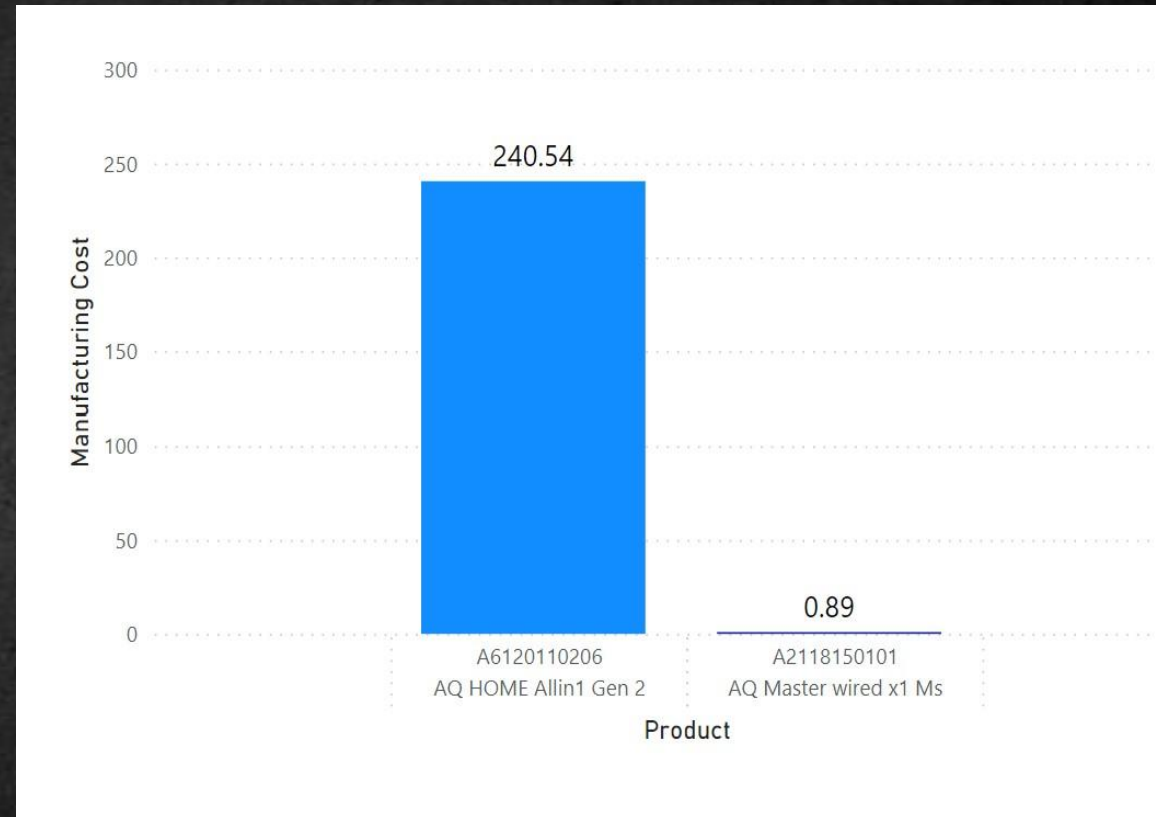
Request 5

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

Output:

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

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The product **AQ Master wired x1 Ms** has the lowest manufacturing cost, of 0.892. And the product **AQ HOME Allin 1 Gen 2** has the highest manufacturing cost, which is 240.5364

Ad-hoc Analysis

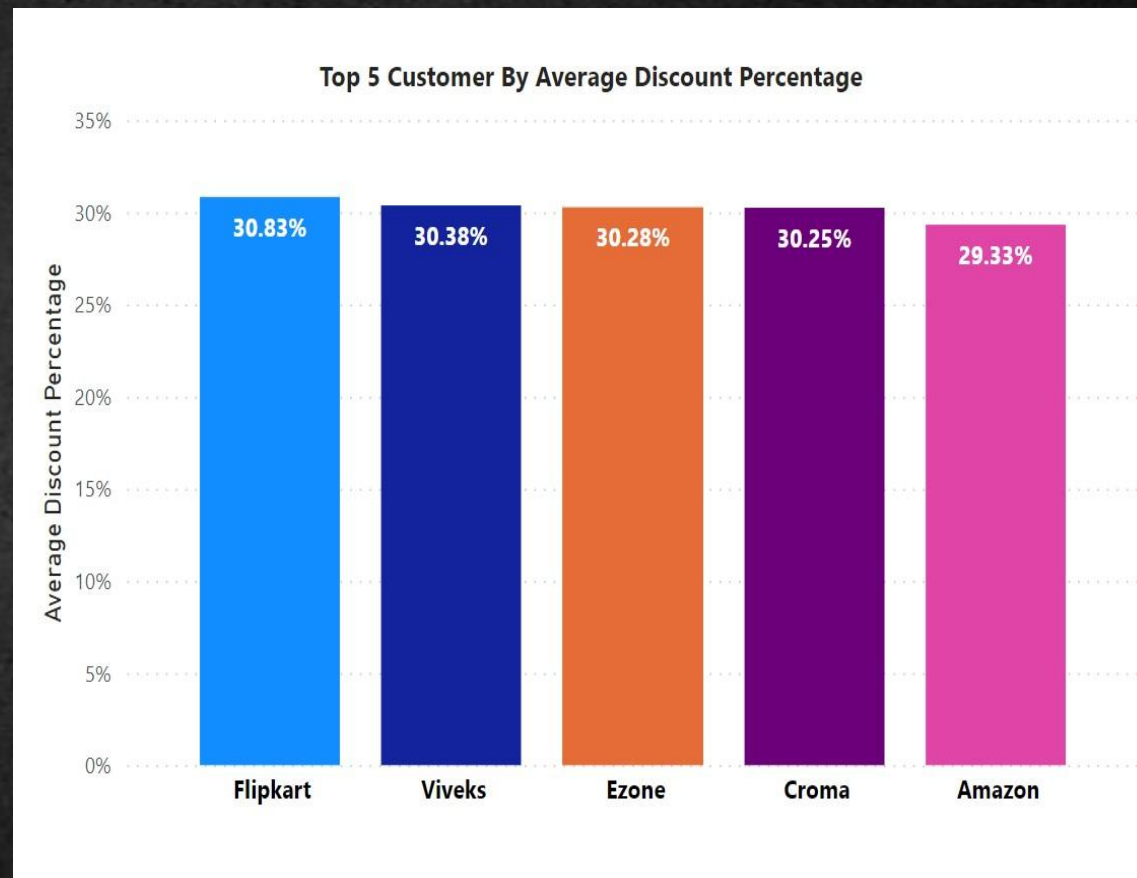
Request 6

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.

Output:

	customer_code	customer	average_discount_percentage
▶	90002009	Flipkart	30.83
	90002006	Viveks	30.38
	90002003	Ezone	30.28
	90002002	Croma	30.25
	90002016	Amazon	29.33

Visual



Insight

For the **fiscal year 2021**, the top 5 customers having the average high pre-invoice discount percentage in the **Indian market** are **Flipkart** the highest with an average pre-invoice discount percentage of **30.83%**, followed by **Viveks**, **Ezone**, **Croma** and **Amazon**.

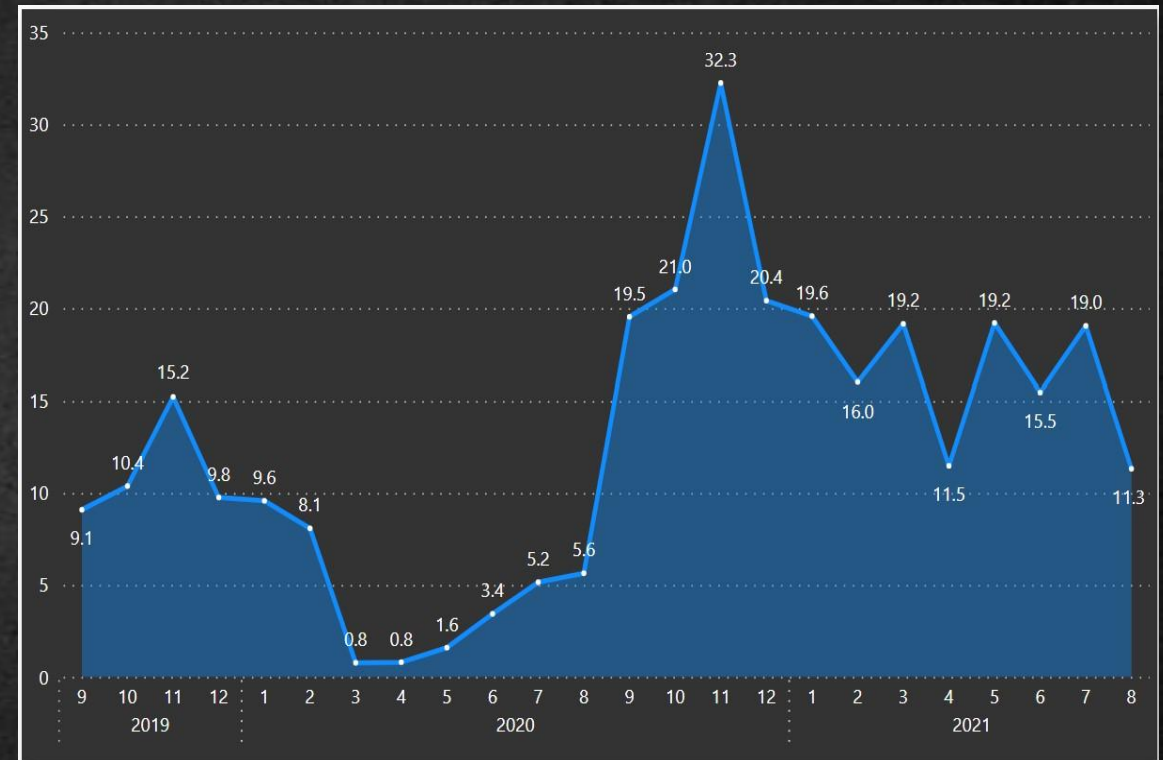
Ad-hoc Analysis

Request 7

Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month. This analysis helps to understand low and high-performing months and take strategic decisions. Output:

	Month	Year	gross_sales_amount
▶	9	2019	9092670.339
	10	2019	10378637.596
	11	2019	15231894.967
	12	2019	9755795.058
	1	2020	9584951.939
	2	2020	8083995.548
	3	2020	766976.453
	4	2020	800071.954
	5	2020	1586964.477
	6	2020	3429736.571
	7	2020	5151815.402
	8	2020	5638281.829
	9	2020	19530271.303
	10	2020	21016218.210
	11	2020	32247289.795
	12	2020	20409063.177
	1	2021	19570701.710
	2	2021	15986603.888
	3	2021	19149624.924
	4	2021	11483530.303
	5	2021	19204309.410
	6	2021	15457579.663
	7	2021	19044968.816
	8	2021	11324548.341

Visual



Insight

In November 2020, Atliq Exclusive recorded its highest gross sales amount of 32.25M, while its lowest gross sales of 767K was recorded in March 2020. The company experienced a decrease in sales between March to August, which was attributed to the manufacturing halts caused by the COVID-19 lockdown. However, sales began to increase after August due to the adoption of virtual engagement in both schools and work increassing the demnad in the market. This culminated in the company achieving its highest gross sales amount in November.

Ad-hoc Analysis

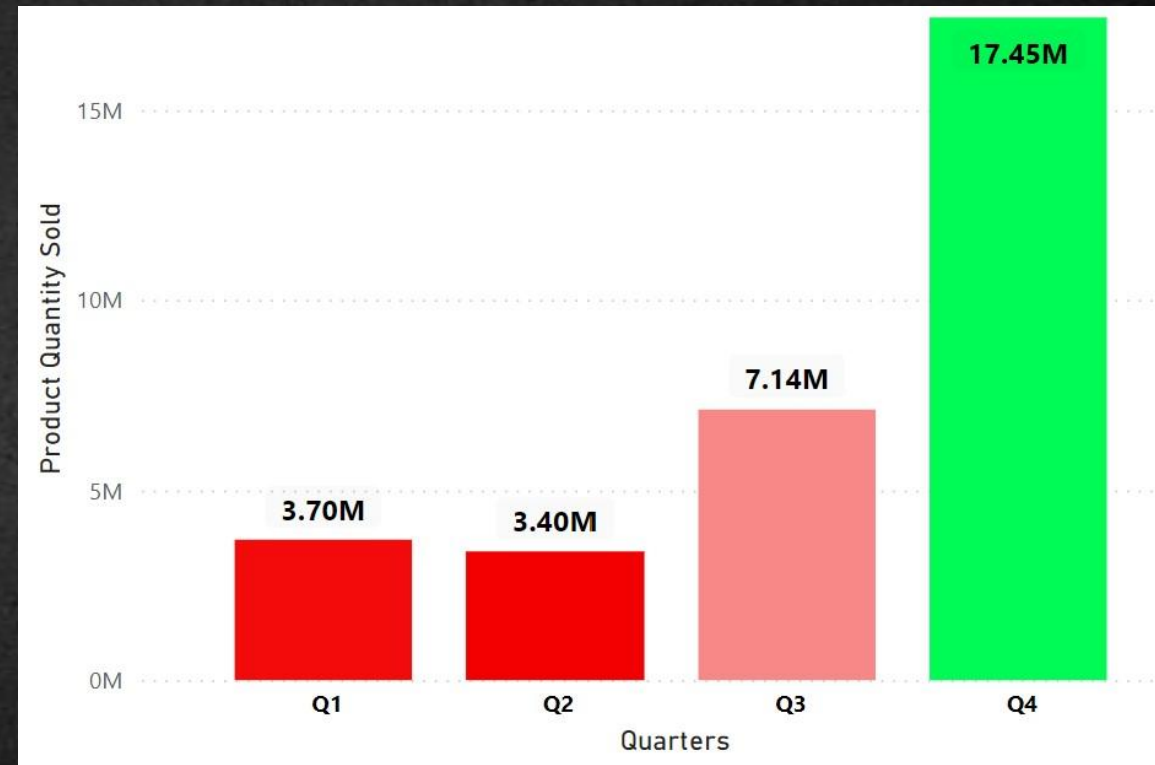
Request 8

In which quarter of 2020, got the maximum total_sold_quantity?

Output:

	Quarter	total_sold_quantity
►	Q4	17447125
	Q3	7137551
	Q1	3704398
	Q2	3395899

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The **fourth quarter** is typically a strong period for sales in the technology industry, which may explain the higher sales during this period. This could be due to factors such as holiday sales or end-of-year budget spending.

The **third quarter** may also be a significant period for sales, indicating that the company's products are in demand during the summer months.

The **first quarter** may be a slightly slower period for sales, possibly due to the post-holiday season or the start of a new fiscal year for some companies.

The company may need to adjust its production and inventory management strategy to align with the seasonal trends in sales.

Ad-hoc Analysis

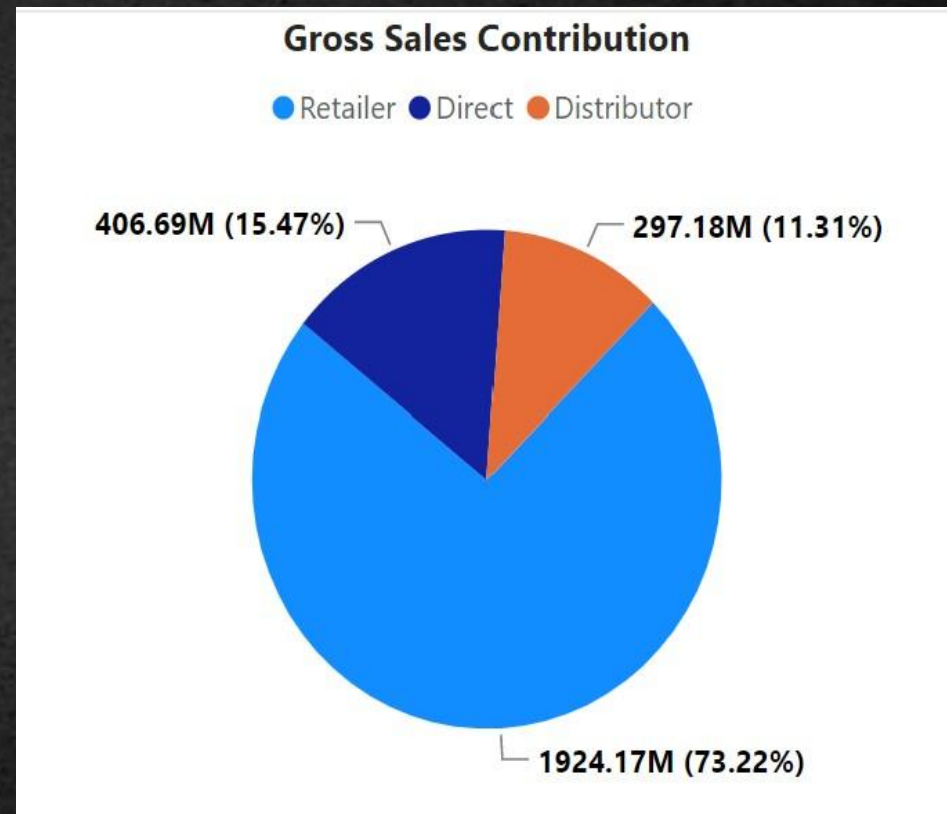
Request 9

Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

Output:

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

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Retailers are the most important distribution channel for the company, accounting for 73.22% of its sales. This indicates that the company has a strong relationship with retailers and may need to focus on maintaining these relationships to ensure continued success.

Direct and **distributor** channels account for a smaller share of the company's sales, suggesting that the company may want to consider increasing its efforts in these areas to diversify its sales channels and reach new customers.

Ad-hoc Analysis

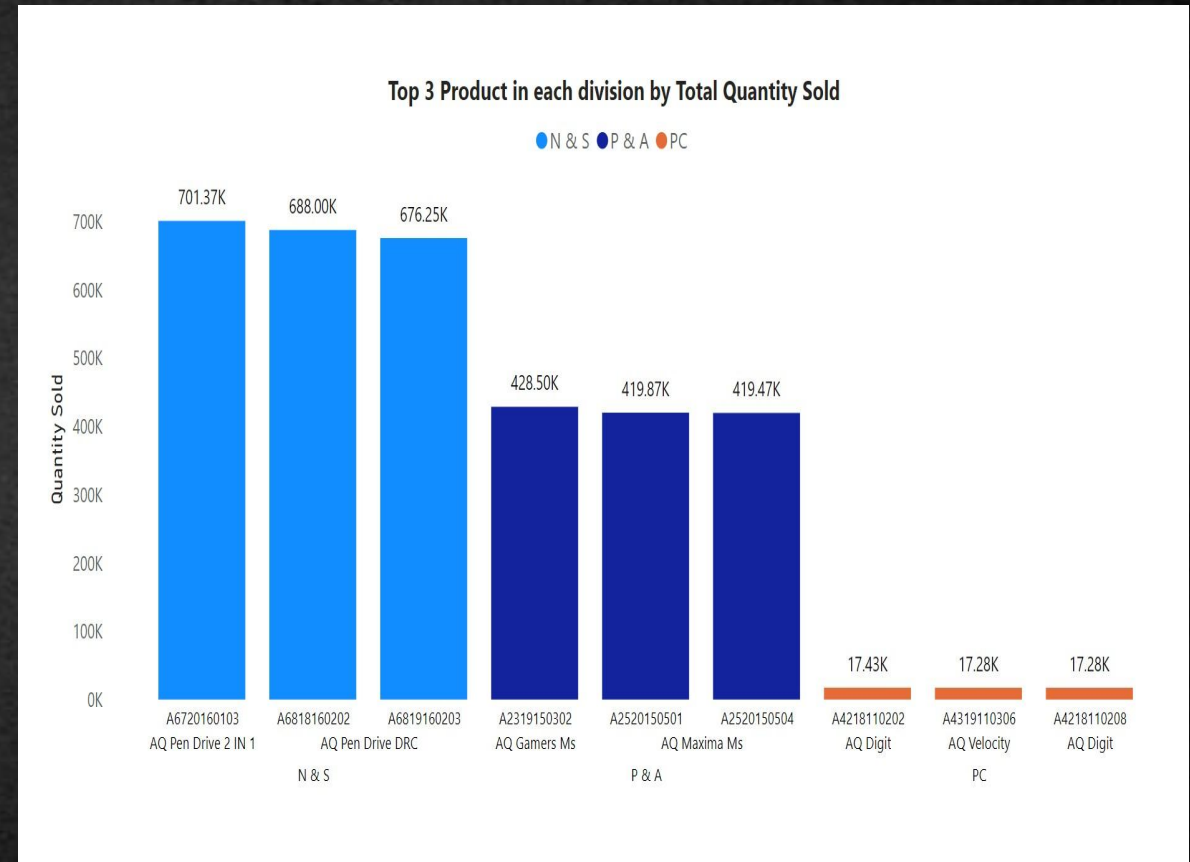
Request 10

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

Output:

	division	product_code	product	total_sold	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

Visual



Insight

The most sold quantity for the top 3 products is from **N & S division**.

THANK
YOU