



Consumer Goods Analytics

SQL PROJECT



AGENDA



BACKGROUND/CONTEXT



GETTING FAMILIAR WITH
ATLIQ'S BUSINESS – THEIR
MARKETS AND PRODUCT
LINES



GETTING FAMILIAR WITH THE
INPUT DATA



AD-HOC REQUESTS ALONG
WITH THE QUERIED RESULTS,
VISUALIZATIONS AND
INSIGHTS



1. Background/Context

Our Company

Atliq Hardware, an imaginary company, stands out as a premier producer of computer hardware in India.

Background

The leadership observed a lack of sufficient insights for making prompt and intelligent decisions based on data.

Problem

The company requires insights for 10 ad-hoc requests.

Approach

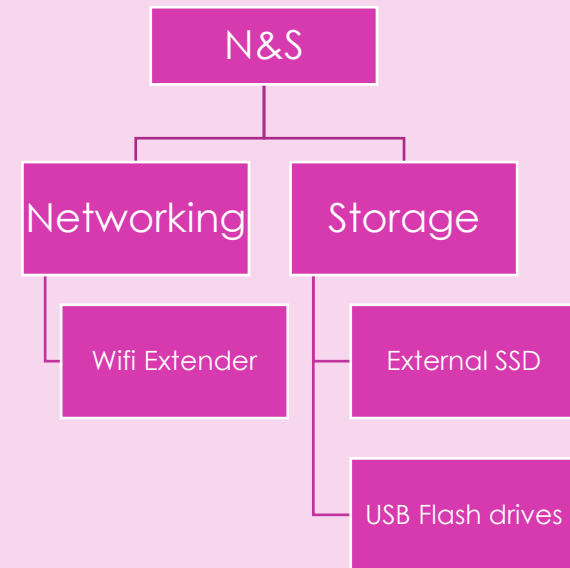
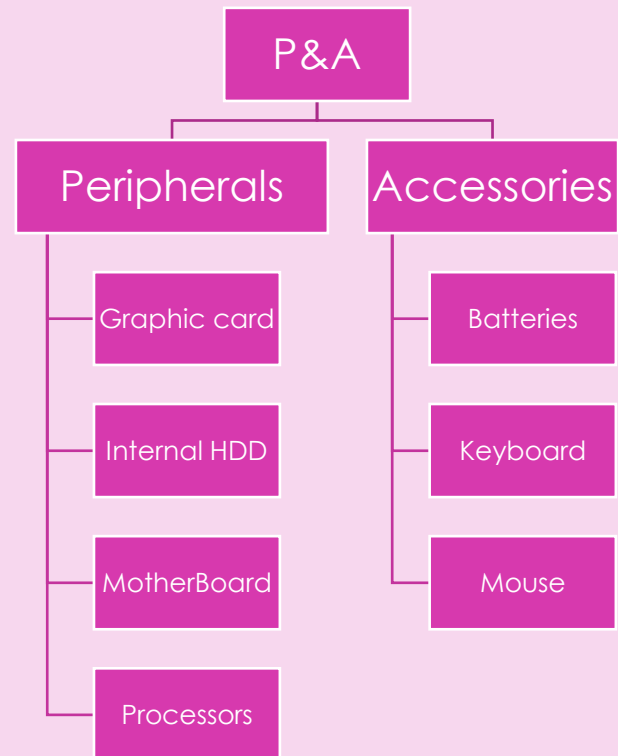
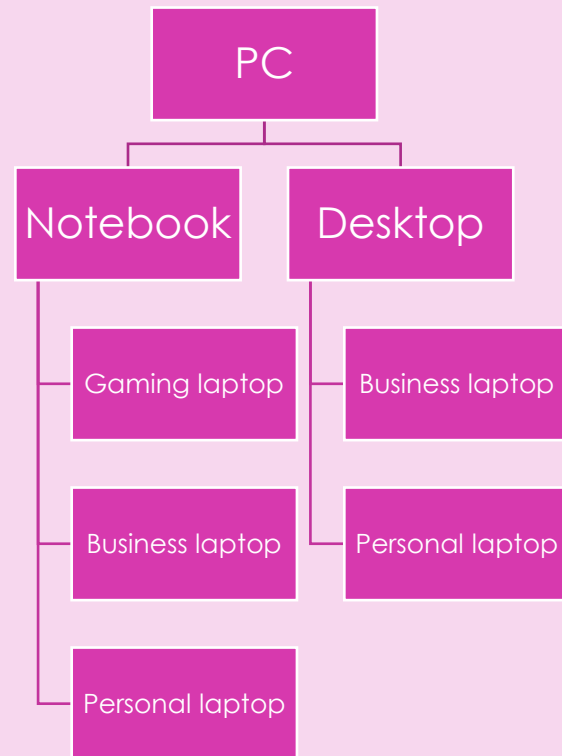
Execute a SQL query to address these inquiries. Transform the results into visual representations and deliver the insights to the upper-level management.

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

ATLIQ'S MARKETS



Atliq's Product lines



3. *Getting familiar with the input data*

- The input data comprises sales data for both fiscal years 2020 and 2021, accompanied by various dimension tables such as customer details, product details, and others.

dim_product
product_code VARCHAR(45)
division VARCHAR(45)
segment VARCHAR(45)
category VARCHAR(45)
product VARCHAR(200)
variant VARCHAR(45)

fact_sales_monthly
date DATE
product_code VARCHAR(45)
customer_code INT
sold_quantity INT
fiscal_year YEAR

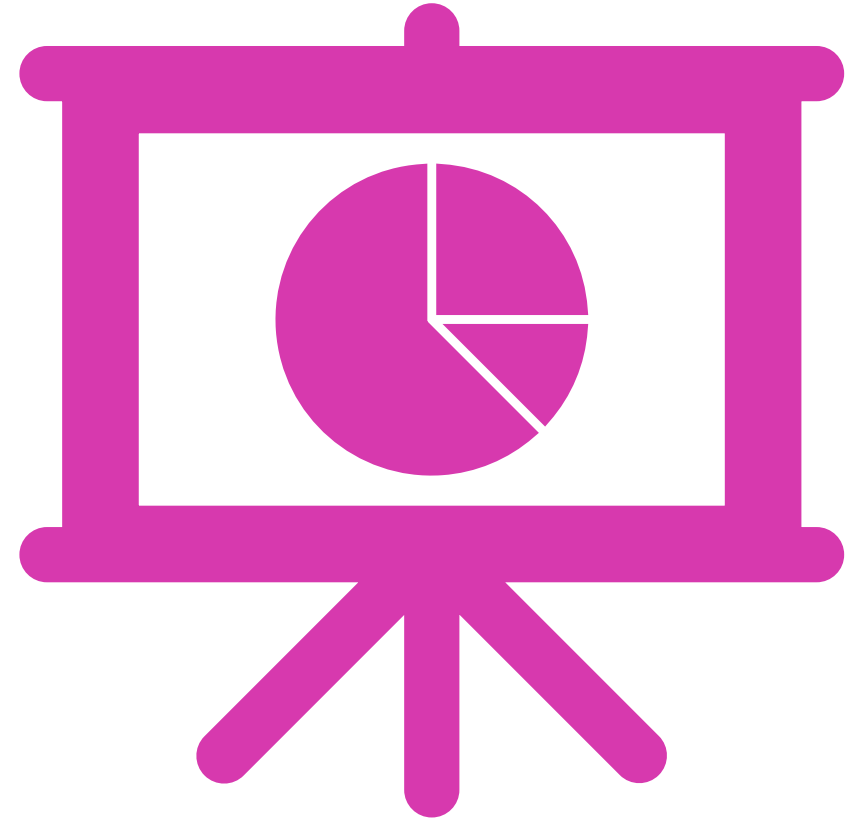
fact_manufacturing_cost
product_code VARCHAR(45)
cost_year YEAR
manufacturing_cost DECIMAL(15,4)

fact_pre_invoice_deductions
customer_code INT
fiscal_year YEAR
pre_invoice_discount_pct DECIMAL(5,4)

fact_gross_price
product_code VARCHAR(45)
fiscal_year YEAR
gross_price DECIMAL(15,4)

dim_customer
customer_code INT
customer VARCHAR(150)
platform VARCHAR(45)
channel VARCHAR(45)
market VARCHAR(45)
sub_zone VARCHAR(45)
region VARCHAR(45)

***4. Ad-hoc
requests,
queried
results,
Insights and
visualization***



1. Ad-hoc requests

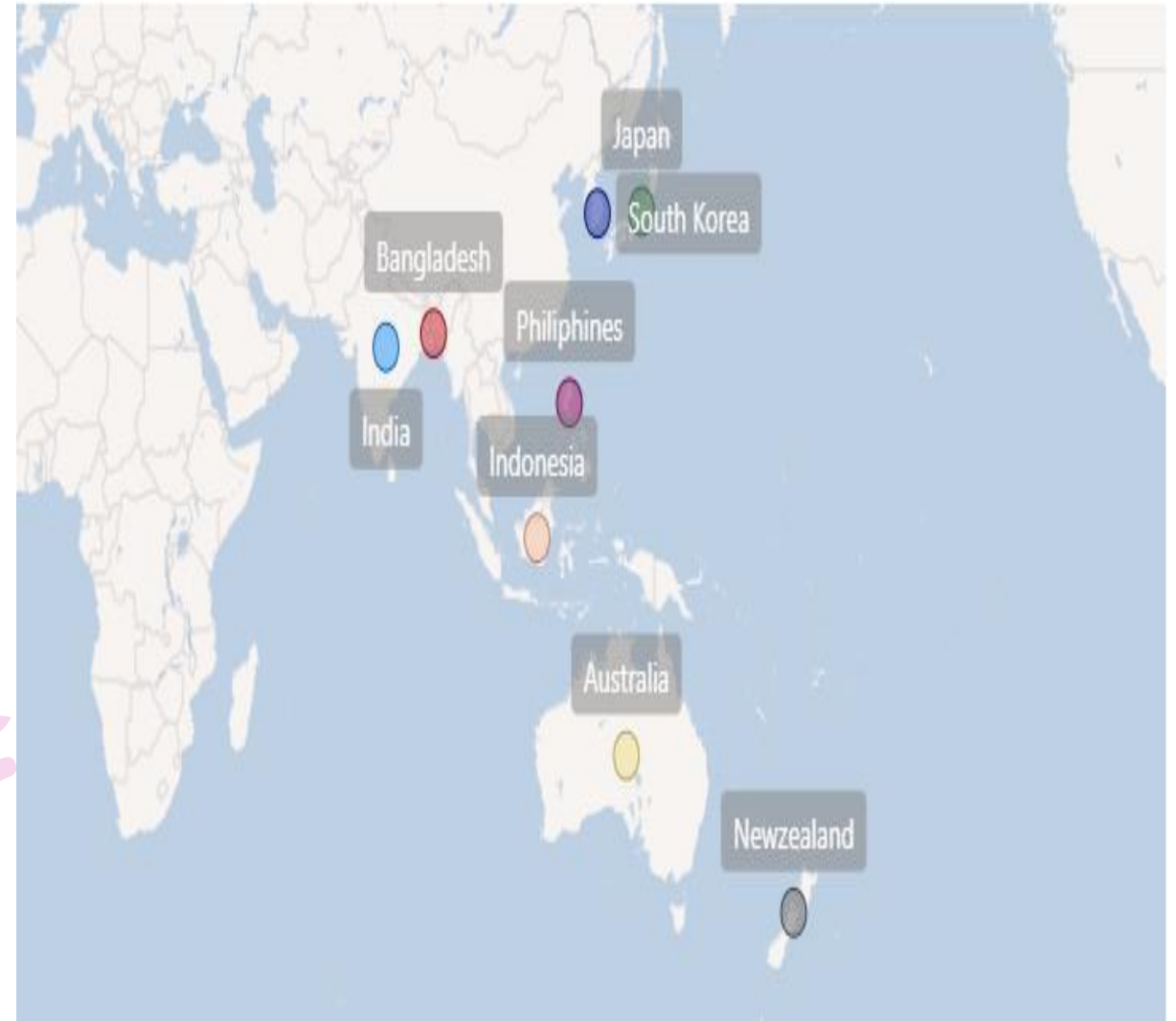
- Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

Output

	market
▶	India
	Indonesia
	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh

Insights

- Atliq Exclusive" maintains a strong presence in numerous countries throughout the APAC region, spanning India, Indonesia, Japan, the Philippines, South Korea, Australia, New Zealand, and Bangladesh. This underscores its resilient market position and its ability to adjust effectively to diverse cultural and economic landscapes within the Asia-Pacific region.



2. Ad-hoc requests

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_chg
►	245	334	36.33

Insights

- It's a positive indication of our commitment to innovation and product development that we consistently bring new offerings to the market. In the fiscal year 2020, our product lineup comprised 245 items. However, in fiscal year 2021, we experienced a notable surge, witnessing a 36% increase, resulting in a total of 334 products.



3. Ad-hoc requests

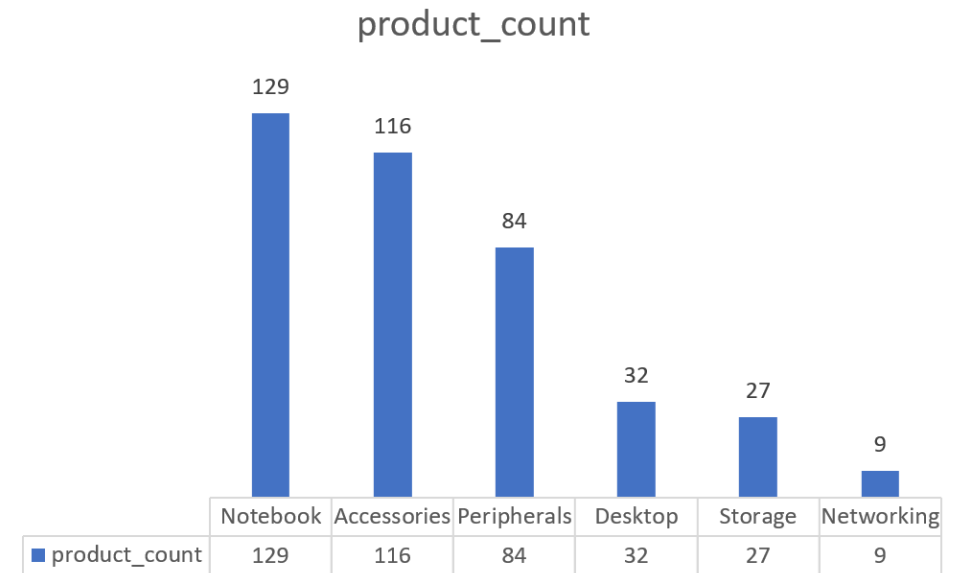
- Provide a report with all the unique product counts for each segment and sort them in descending order of product counts. The final output contains 2 fields:
 - Segment
 - product_count

Output

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

Insights

- Among the segments, the "Notebook" category boasts the largest product count, totaling 129 items.
- Conversely, the "Networking" segment has the smallest product count, comprising only 9 products.
- These findings underscore the diverse product offerings within each segment, showcasing the extensive options available in "Notebook" and "Accessories," while highlighting the more restricted selection in "Networking."
- The range of products across segments caters to a multitude of customer preferences and needs, ensuring a versatile and comprehensive market approach.



4. *Ad-hoc requests*

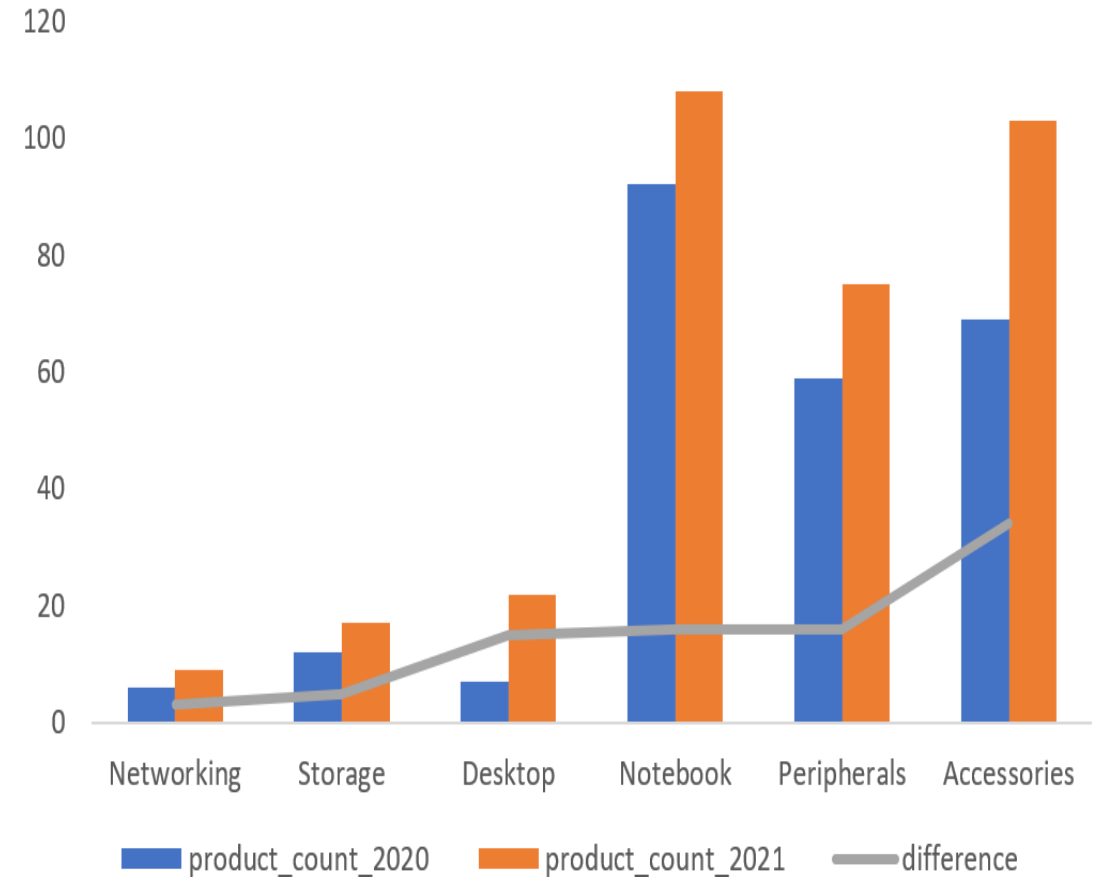
- Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields:
 - Segment
 - product_count_2020
 - product_count_2021
 - difference

Output

	segment	product_count_2020	product_count_2021	difference
	Networking	6	9	3
	Storage	12	17	5
▶	Desktop	7	22	15
	Notebook	92	108	16
	Peripherals	59	75	16
	Accessories	69	103	34

Insights

- During 2021, our primary emphasis was on expanding the diversity of our accessories category, with the introduction of 34 new products to the market.



5. *Ad-hoc requests*

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
▶	A6121110208	AQ HOME Allin1 Gen 2 (Premium 2)	2022	263.4207
	A2118150101	AQ Master wired x1 Ms (Standard 1)	2019	0.8654

Insights

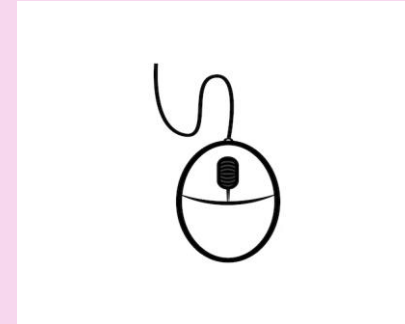
Which of our products has the highest manufacturing cost?



240.54\$

AQ HOME Allin1 Gen 2 (Plus 3)
Personal Desktop

Which of our products has the lowest manufacturing cost?



0.89\$

AQ Master wired x1 Ms (Standard 1)
Mouse

6. *Ad-hoc requests*

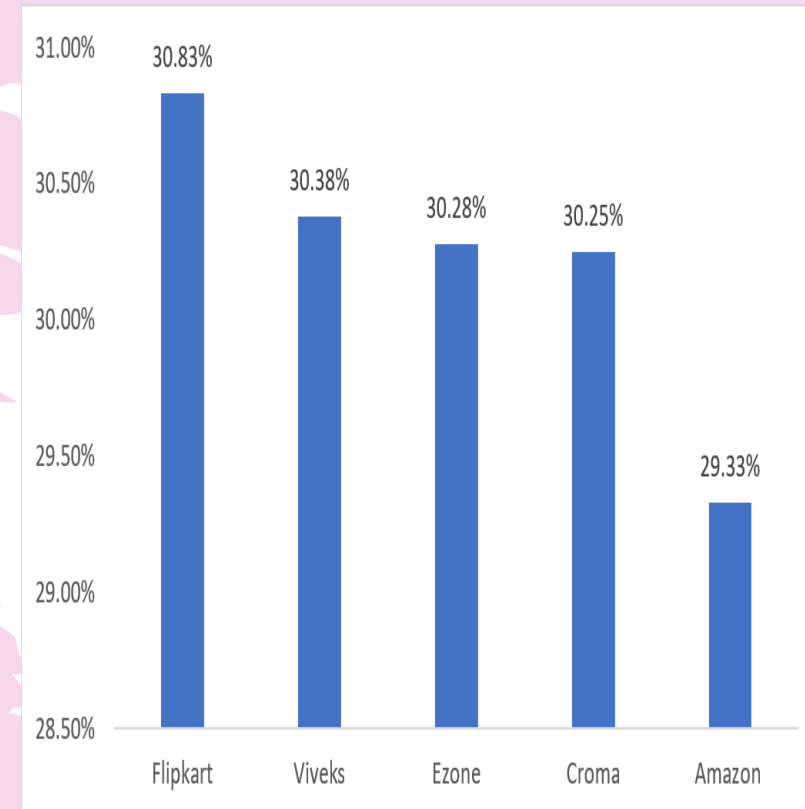
- Generate a report which contains the top 5 customers who received an average high pre_invoice discount_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields:
 - customer_code
 - Customer
 - average_discount_percentage

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

Insights

- In the year 2021, we provided nearly identical pre-invoice discount rates to our top five customers. Notably, Flipkart received the highest discount among them, standing at 30.83%, highlighting its position as the most discounted customer in the Indian market.
- These findings offer valuable insights for refining discount strategies and gaining a deeper understanding of customer preferences.



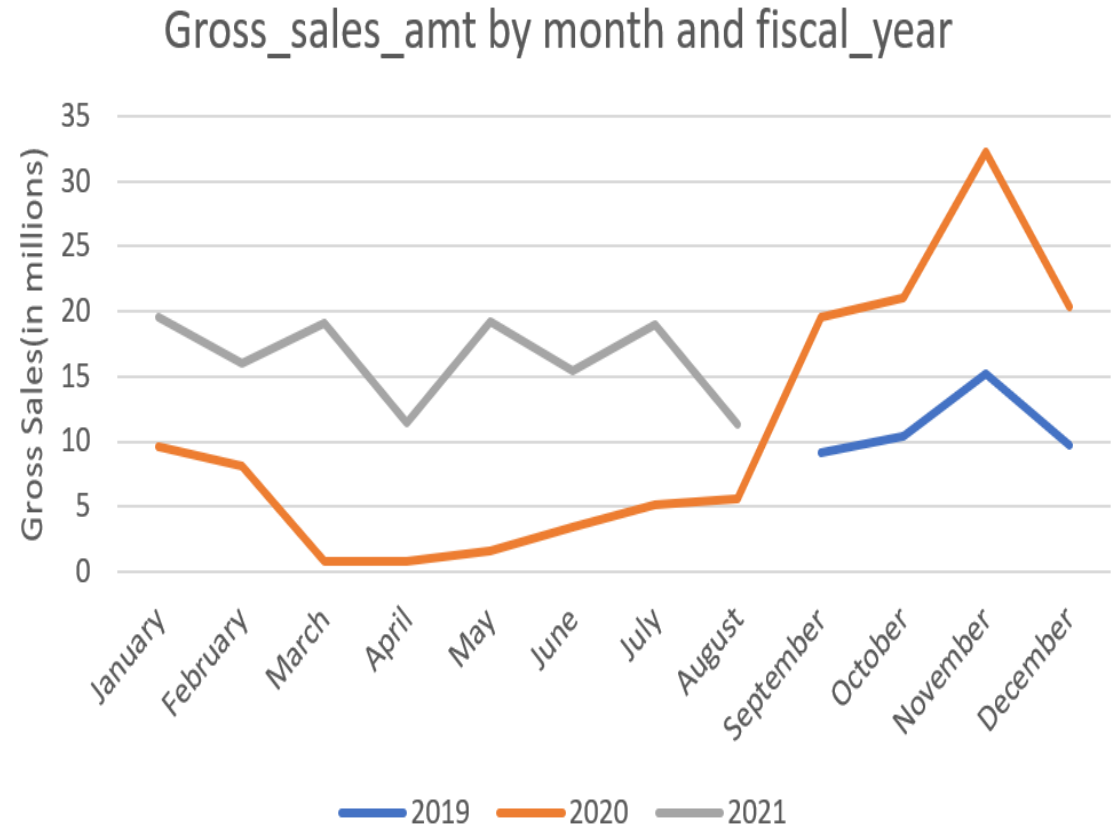
7. *Ad-hoc requests*

- 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

Insights

- Atliq Exclusive experienced its peak sales in November 2020, while March 2020 recorded the lowest gross sales. The impact of COVID-19 is apparent in the reduced sales observed between March and August. Nevertheless, a positive trend emerged as sales rapidly rebounded post-August, reaching the highest levels in November—marking the highest point in the past two years.



8. *Ad-hoc requests*

In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the total_sold_quantity:

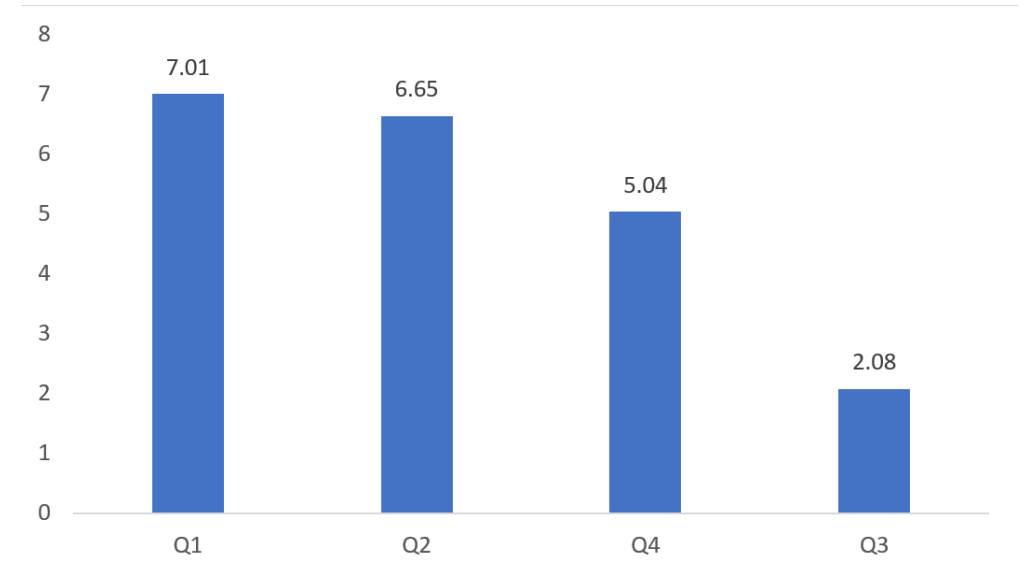
- Quarter
- total_sold_quantity

Output

	Quarters	total_sold_qty_in_millions
	Q3	2.08
	Q4	5.04
	Q2	6.65
▶	Q1	7.01

Insights

This further reinforces the earlier observation regarding the impact of COVID-19 on our sales. Specifically, in the third quarter of fiscal year 2020 (encompassing March, April, and May, the peak months of the pandemic), the quantity sold decreased to 2.1 million. However, our recovery commenced swiftly, persisting through the fourth quarter. This early rebound can likely be attributed to the heightened demand for hardware, particularly desktops and notebooks, as a significant number of students initiated or continued their coursework online. Additionally, there was a substantial surge in demand for computer accessories during this period.



9. *Ad-hoc requests*

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

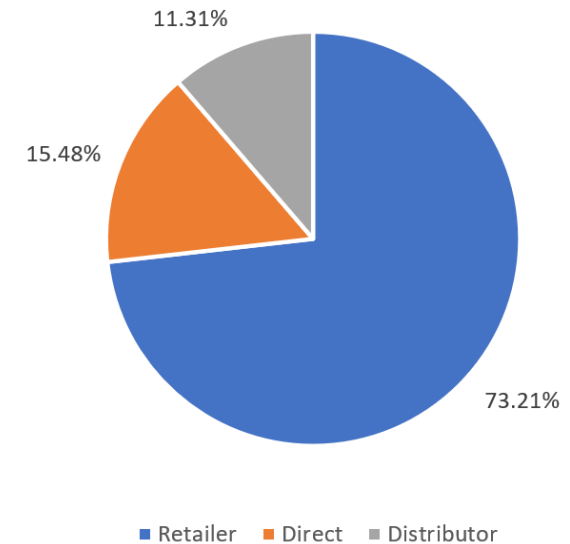
- Channel
- gross_sales_mln
- percentage

Output

	channel	gross_sales_mln	pct
►	Retailer	3708.46	73.21
	Direct	784.14	15.48
	Distributor	572.86	11.31

Insights

- The majority of sales, amounting to 73.22% of gross sales, are attributed to the "Retailer" channel. The "Direct" channel also holds a noteworthy position, comprising 15.47% of gross sales. The "Distributor" channel contributes 11.31% to gross sales. The notable emphasis on the "Retailer" channel indicates its role as the primary revenue driver. To maximize sales further, there is potential for exploring diversification and growth opportunities in the "Direct" and "Distributor" channels.



10. Ad-hoc requests

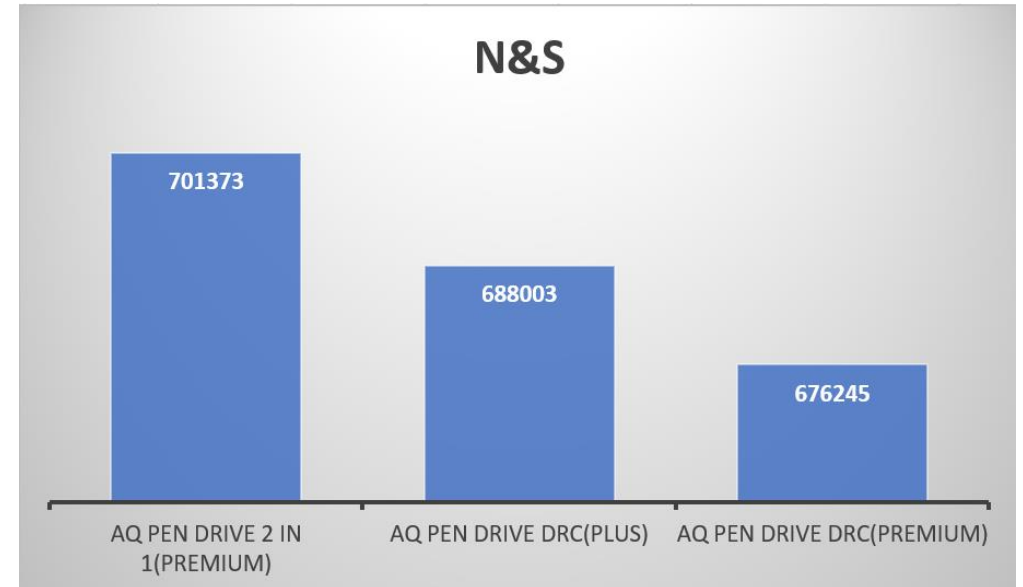
- Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021? The final output contains these fields:
 - Division
 - product_code
 - Product
 - total_sold_quantity
 - rank_order

Output

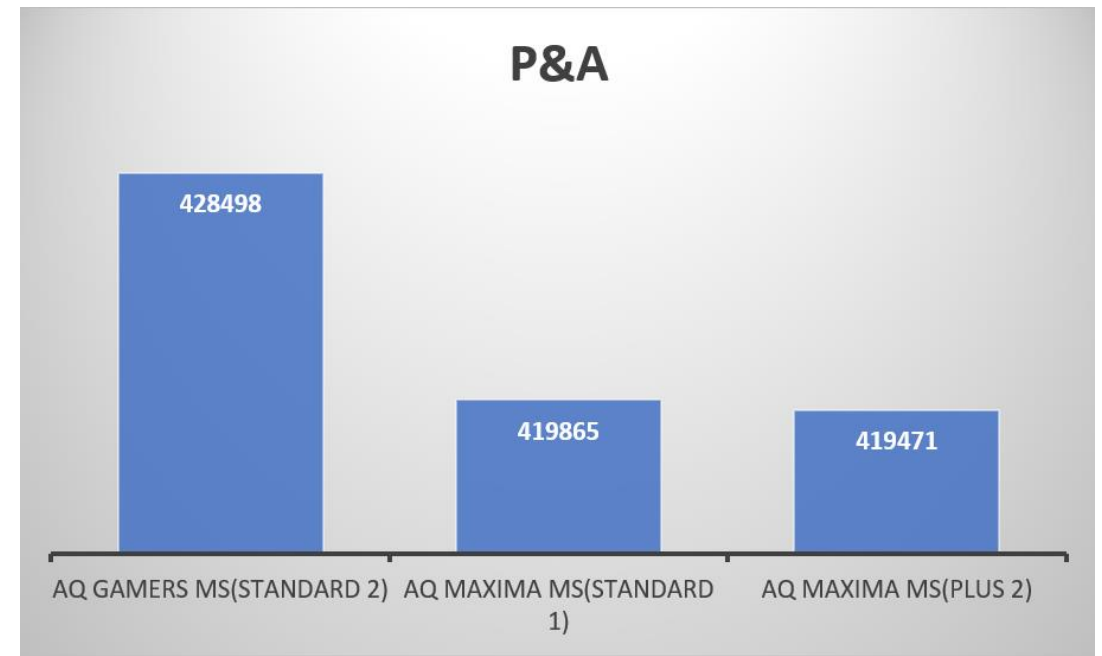
	division	product_code	product	total_sold_quantity	rank_order
►	N & S	A6720160103	AQ Pen Drive 2 IN 1(Premium)	701373	1
	N & S	A6818160202	AQ Pen Drive DRC(Plus)	688003	2
	N & S	A6819160203	AQ Pen Drive DRC(Premium)	676245	3
	P & A	A2319150302	AQ Gamers Ms(Standard 2)	428498	1
	P & A	A2520150501	AQ Maxima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

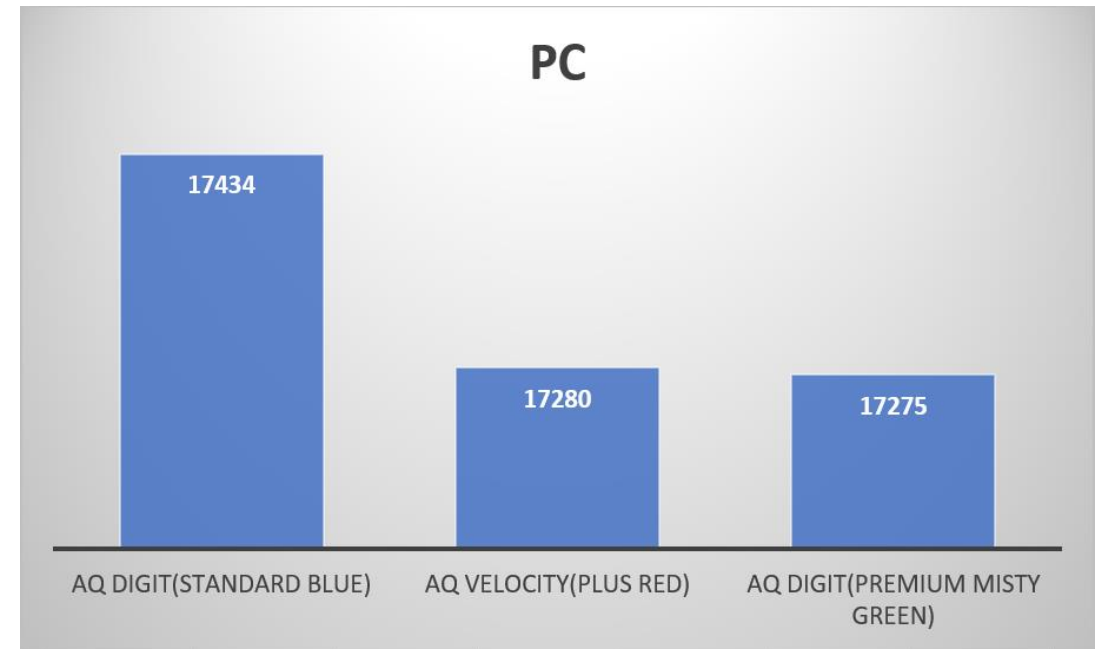
- The three best-selling items in N&S comprised pen drives, with a total quantity of approximately 700,000 units.



The three highest-selling items in the P&A category were mice, with a total quantity of approximately 400,000 units.



The three highest-selling items within the PC category were personal laptops, with a total quantity of approximately 17,000 units.





END
THANK YOU!