Customer Goods Ad-hoc Insights

SQL Project Challenge

About AtliQ Hardware

- **AtliQ Hardwares** is one of the leading computer hardware producers in India and has successfully expanded its operations across multiple countries. The company is known for its innovative products and widespread presence in the global market.

- However, despite its growth, **AtliQ Hardwares** struggles with a key issue:

"Lack of actionable insights to make quick and smart data-driven decisions"

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Problem Statement

As the company scaled, leadership noticed they were missing **key business insights** needed for:

- Strategic planning

- Sales performance tracking

- Cost optimization

- Customer segmentation

To improve decision-making and data utilization, the management decided to **expand their data analytics team** by hiring junior data analysts.

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Objective of the Challenge

To analyze operational and sales data using SQL queries and deliver key business insights for leadership decision-making.

The focus areas included:

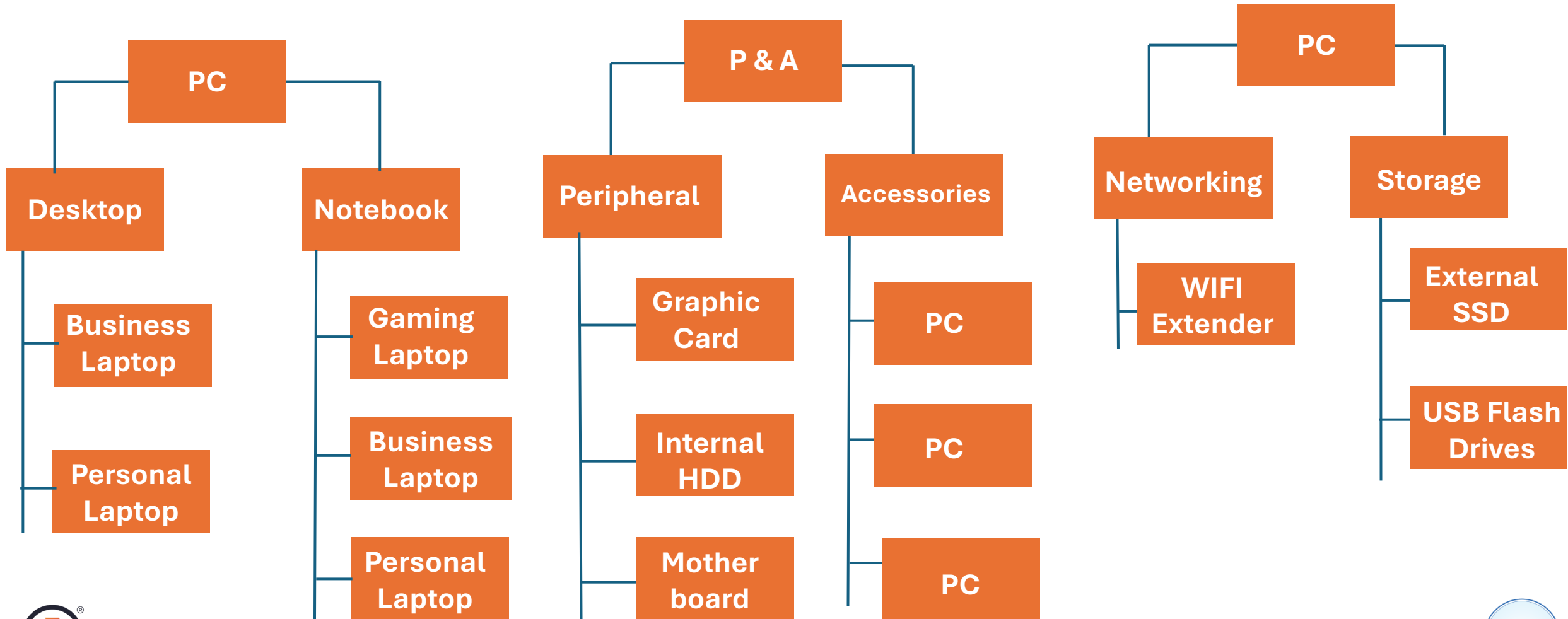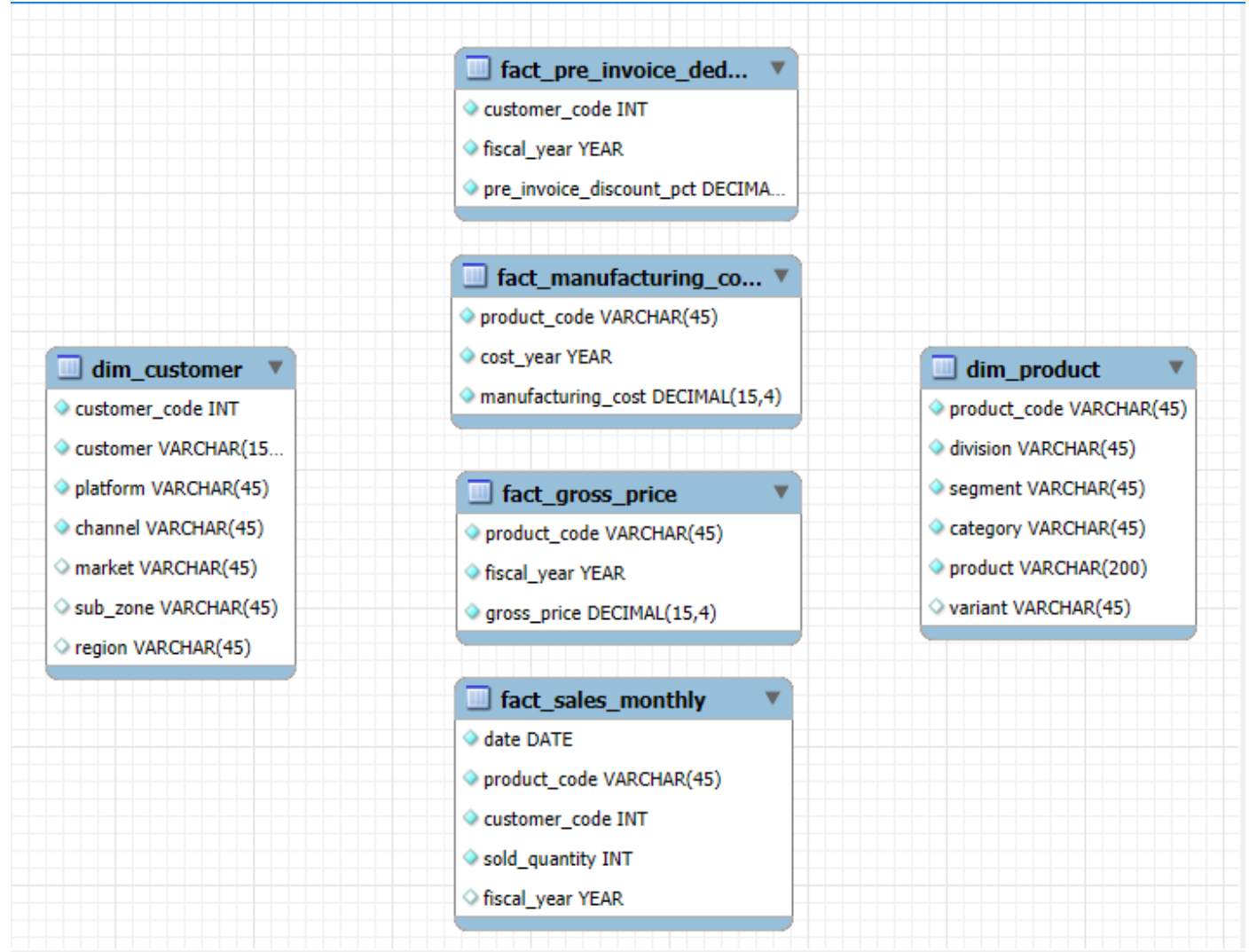| PRODUCT PERFORMANCE | CUSTOMER BEHAVIOR | SALES TRENDS | DISCOUNT IMPACT | MANUFACTURING COST |

Atliq's Product Lines

Request 1:

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

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh
India

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?

	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33
▶	245	334	36.33

Insights

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

36.33 % Increase

334

245

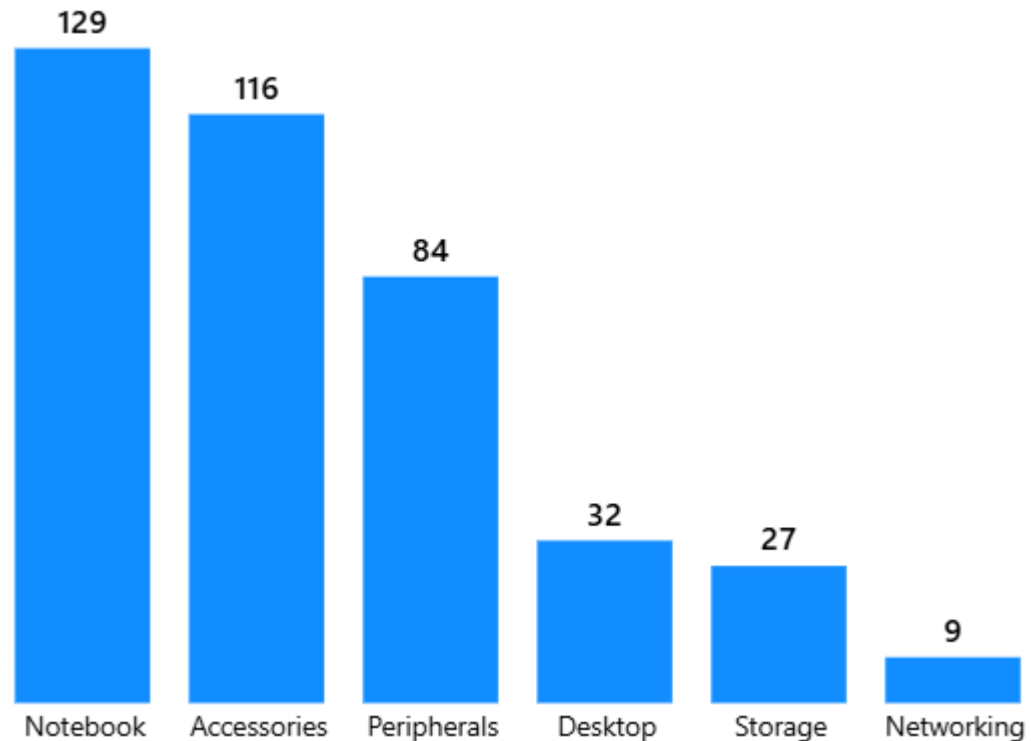● Unique Product 2020 ● Unique Product 2021
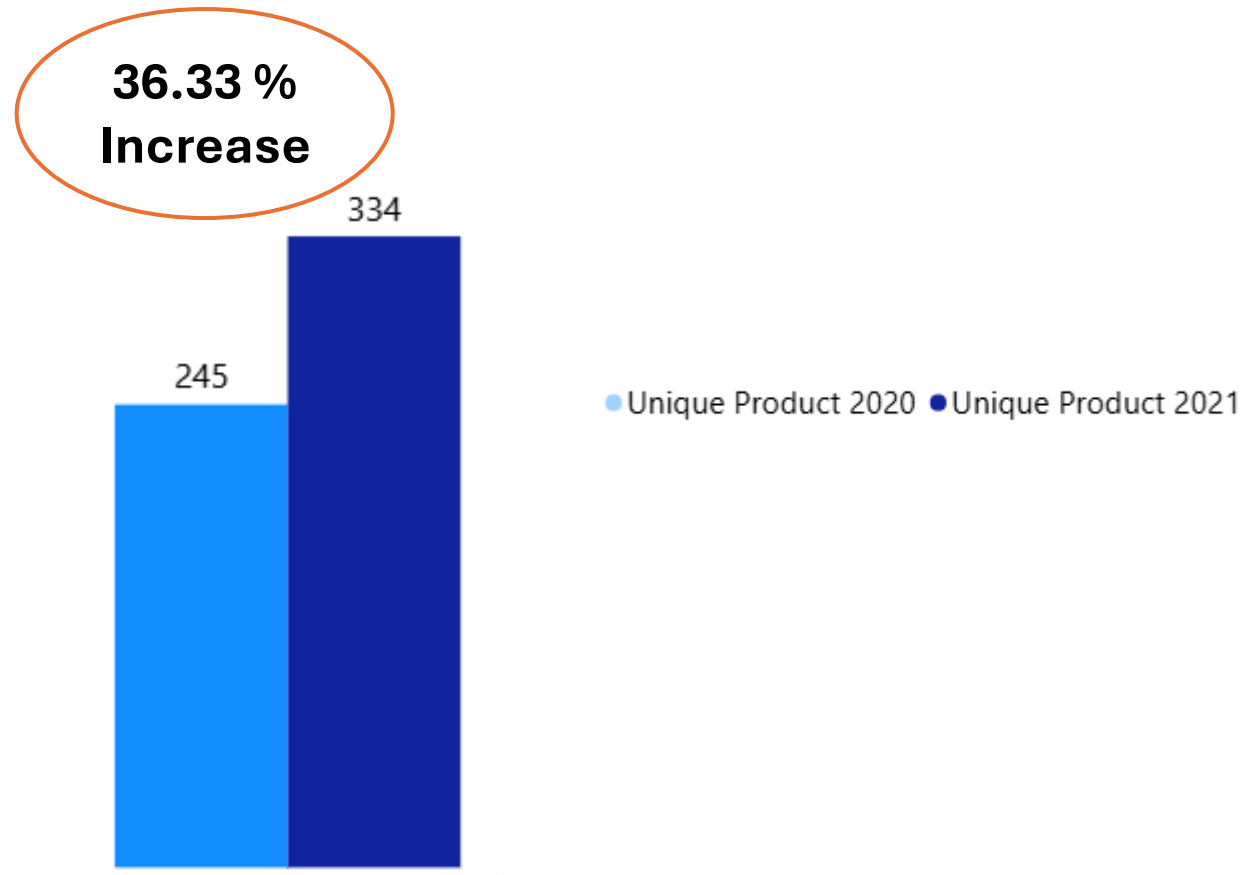
Request 3:

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

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

Request 4:

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

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

Insights

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

segment	Unique Product 2020	Unique Product 2021	Difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5
Total	**245**	**334**	**89**

Which segment had the most increase in unique products in 2021 vs 2020?

Request 5:

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

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

Insights

Which of our products has the highest manufacturing cost?

240.53$

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

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.

customer_code	customer	average_discount_percentage
90002009	Flipkart	0.31
90002006	Viveks	0.30
90002002	Croma	0.30
90002003	Ezone	0.30
90002016	Amazon	0.29

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Insights

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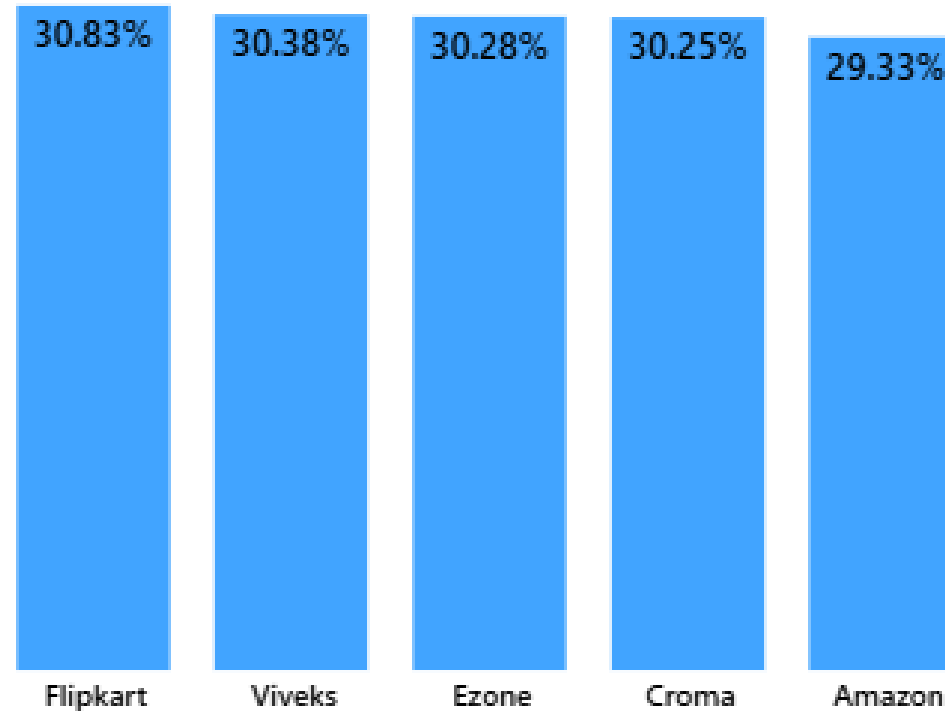
Who are the top 5 customers for whom we offered the most pre-invoice discount percentage in 2021 and in the Indian market?

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.

Month	Year	Gross_sales_Amount
September	2019	9092670.3392
November	2019	15231894.9669
December	2019	9755795.0577
January	2020	9584951.9393
March	2020	766976.4531
April	2020	800071.9543
May	2020	1586964.4768
July	2020	5151815.4020
August	2020	5638281.8287
September	2020	19530271.3028
November	2020	32247289.7946
December	2020	20409063.1769

Month	Year	Gross_sales_Amount
September	2020	19530271.3028
November	2020	32247289.7946
December	2020	20409063.1769
January	2021	19570701.7102
March	2021	19149624.9239
April	2021	11483530.3032
May	2021	19204309.4095
July	2021	19044968.8164
August	2021	11324548.3409
October	2019	10378637.5961
February	2020	8083995.5479
June	2020	3429736.5712
October	2020	21016218.2095
February	2021	15986603.8883
June	2021	15457579.6626

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Insights

For AtliqExclusive, 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
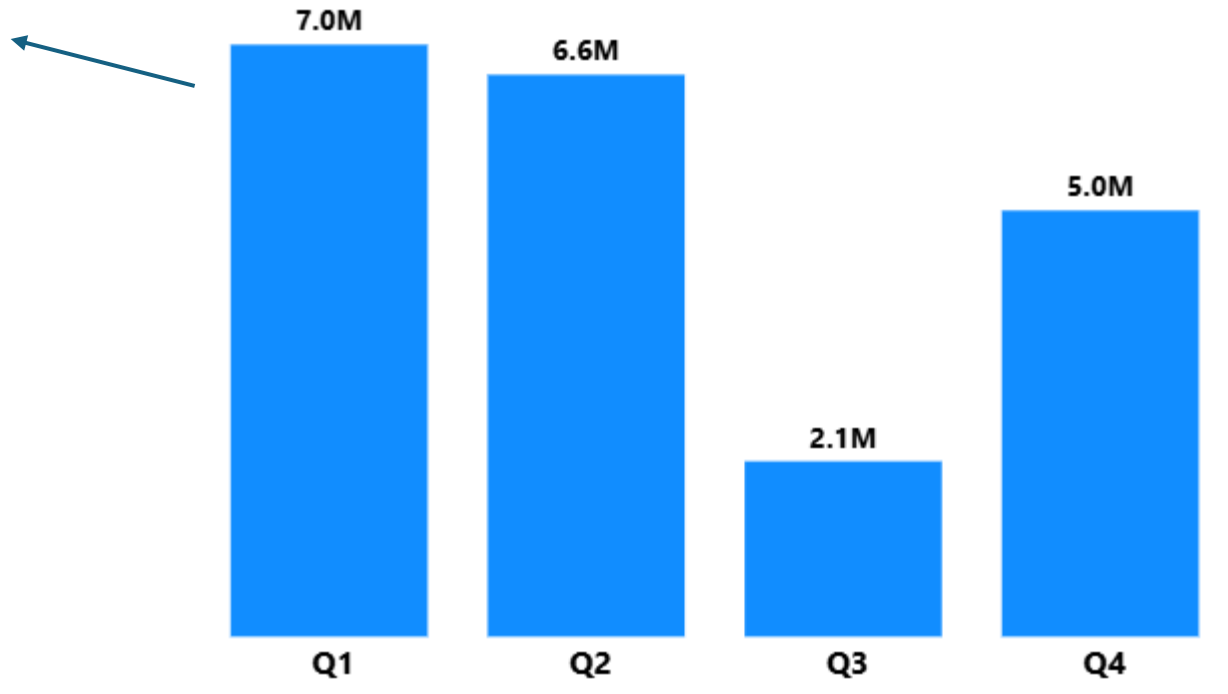

Gross Sales Amount by Year and Month
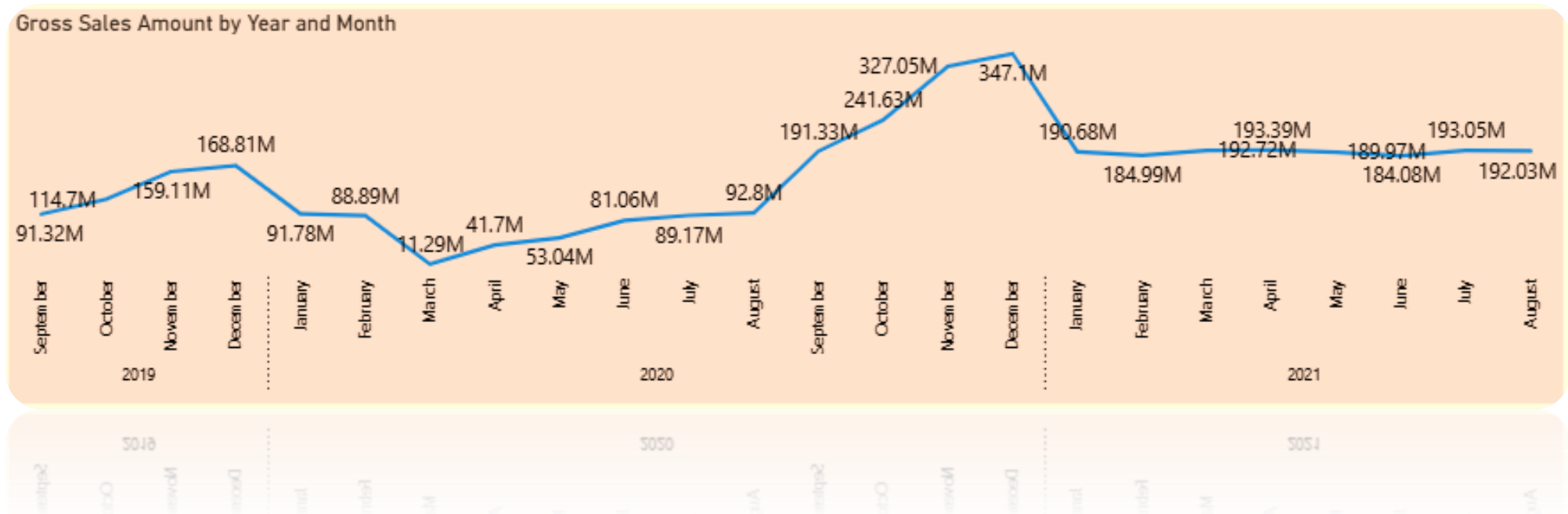
Request 8:

In which quarter of 2020, got the maximum total_sold_quantity?

fiscal_quarter	total_sold_quantity_mln
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

Insights

Quarter 1 has the maximum total sold quantity

	7.0M	6.6M		5.0M

Q1   Q2   Q3   Q4

2.1M

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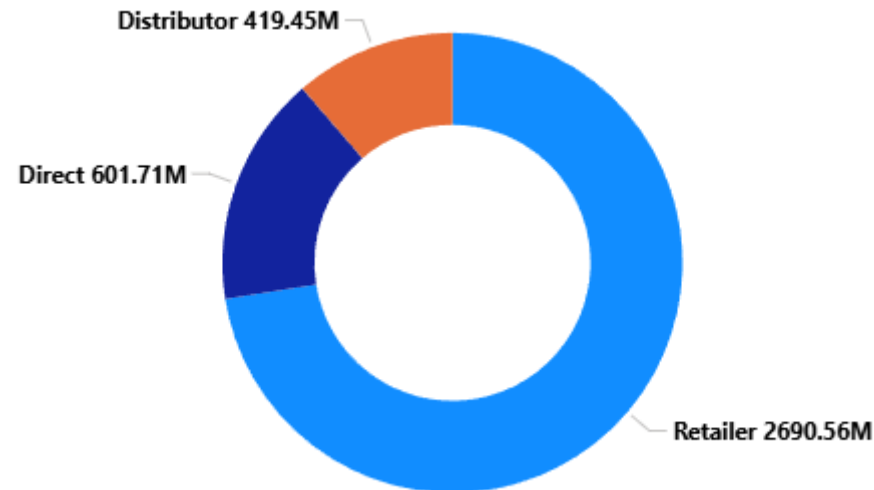
channel	gross_sales_mln	percentage
Retailer	1924.17	73.22
Direct	406.69	15.48
Distributor	297.18	11.31

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Insights

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?

| 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 3 selling products in N&S were pen drives, which were around 7 lakh in quantity
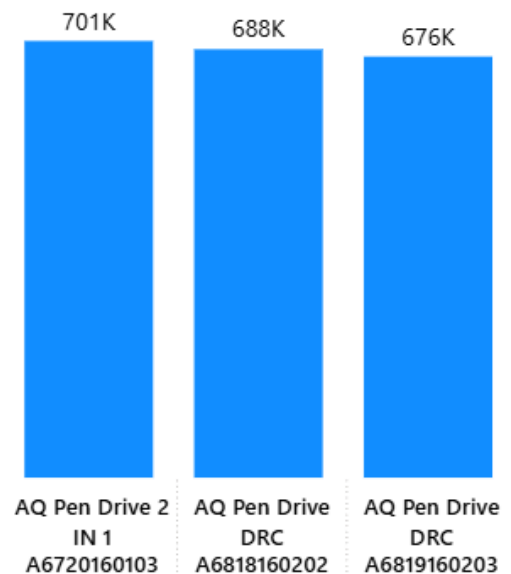
The top 3 selling products in P&A were mouse, which were around 4 lakh in quantity.
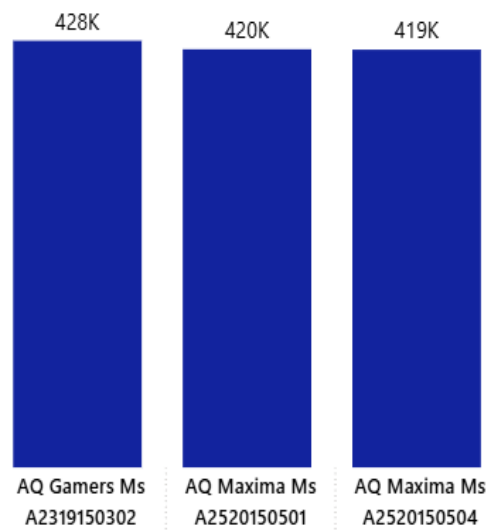
The top 3 selling products in PC were personal laptops, which were around 17000 in quantity
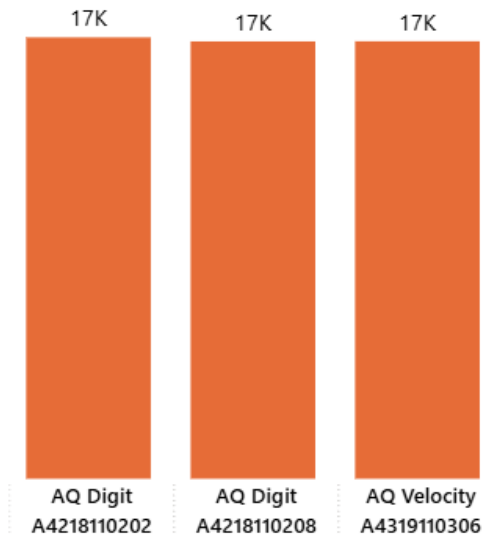
Which are the top 3 selling products in each of Atliq's product lines in FY 2021?