



# **AD-HOC INSIGHTS** **PROJECT**

DOMAIN: CONSUMER GOODS

## Company Overview

**Atliq Hardwares (imaginary company)** is one of the leading computer hardware producers in India and well expanded in other countries too.

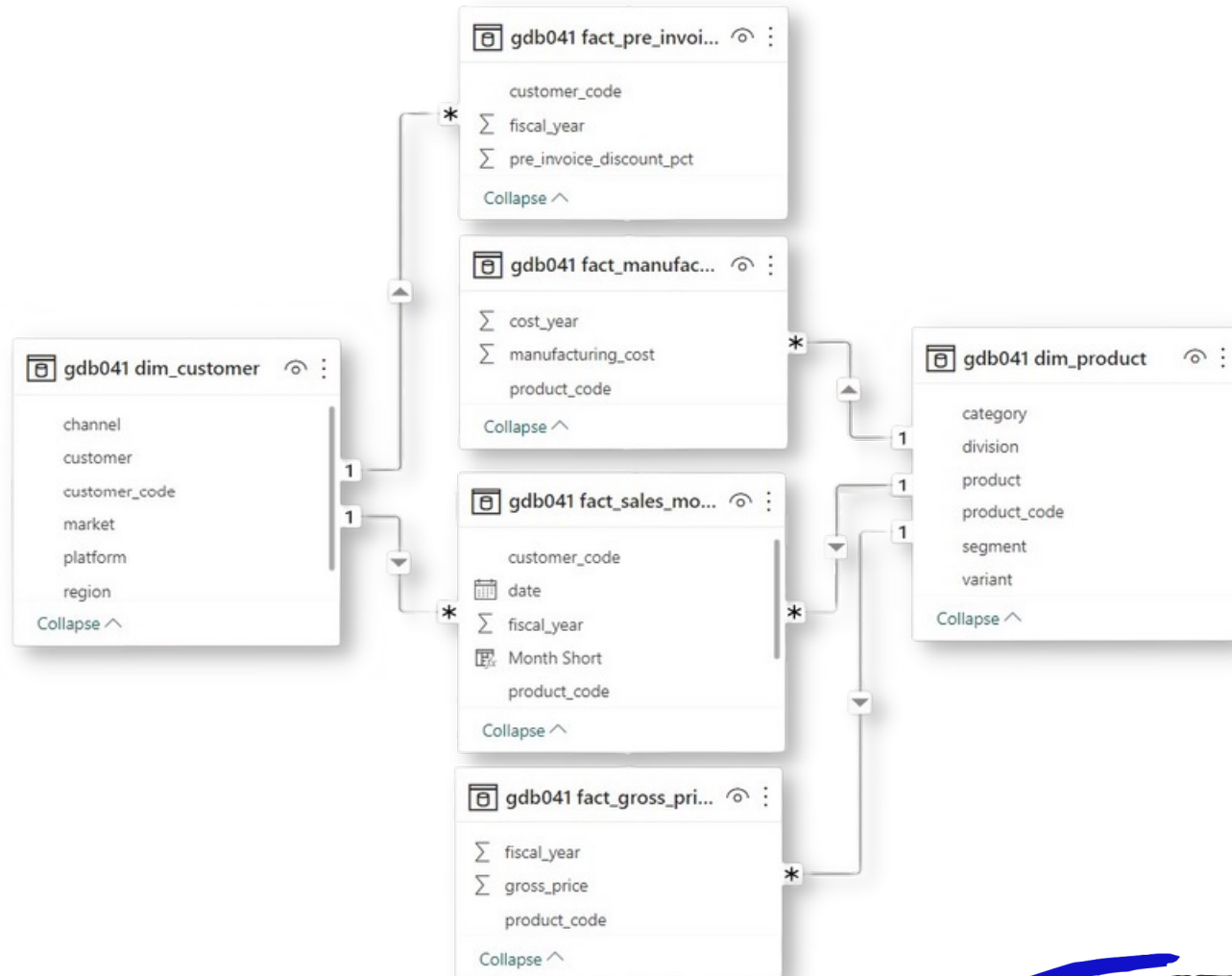
## Objective

Get an overview of the company details and generate insights through evaluate important metrics such as **Gross Profit, Contribution %, Order by Overall Amount Sold, Average Gross Sales, Average Manufacturing Cost**, etc.





# Data Model & Tools



## Codebasics SQL Challenge

### Requests:

1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in 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
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
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
5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,  
product\_code  
product  
manufacturing\_cost
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
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
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
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\_min  
percentage
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

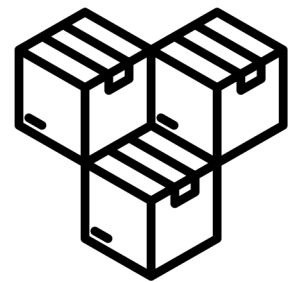
## Question 1

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



## Question 2

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



### UNIQUE PRODUCTS INSIGHTS

**Percentage Increase 36.33%**

In conclusion, the analysis reveals a substantial 36.33% increase in unique products between 2020 and 2021, indicating **a positive trend** in **product diversification and innovation**. This growth not only presents opportunities for businesses to thrive but also offers consumers a more extensive array of **choices**, ultimately contributing to a **dynamic and evolving marketplace**.

**245**

Unique Products 2020

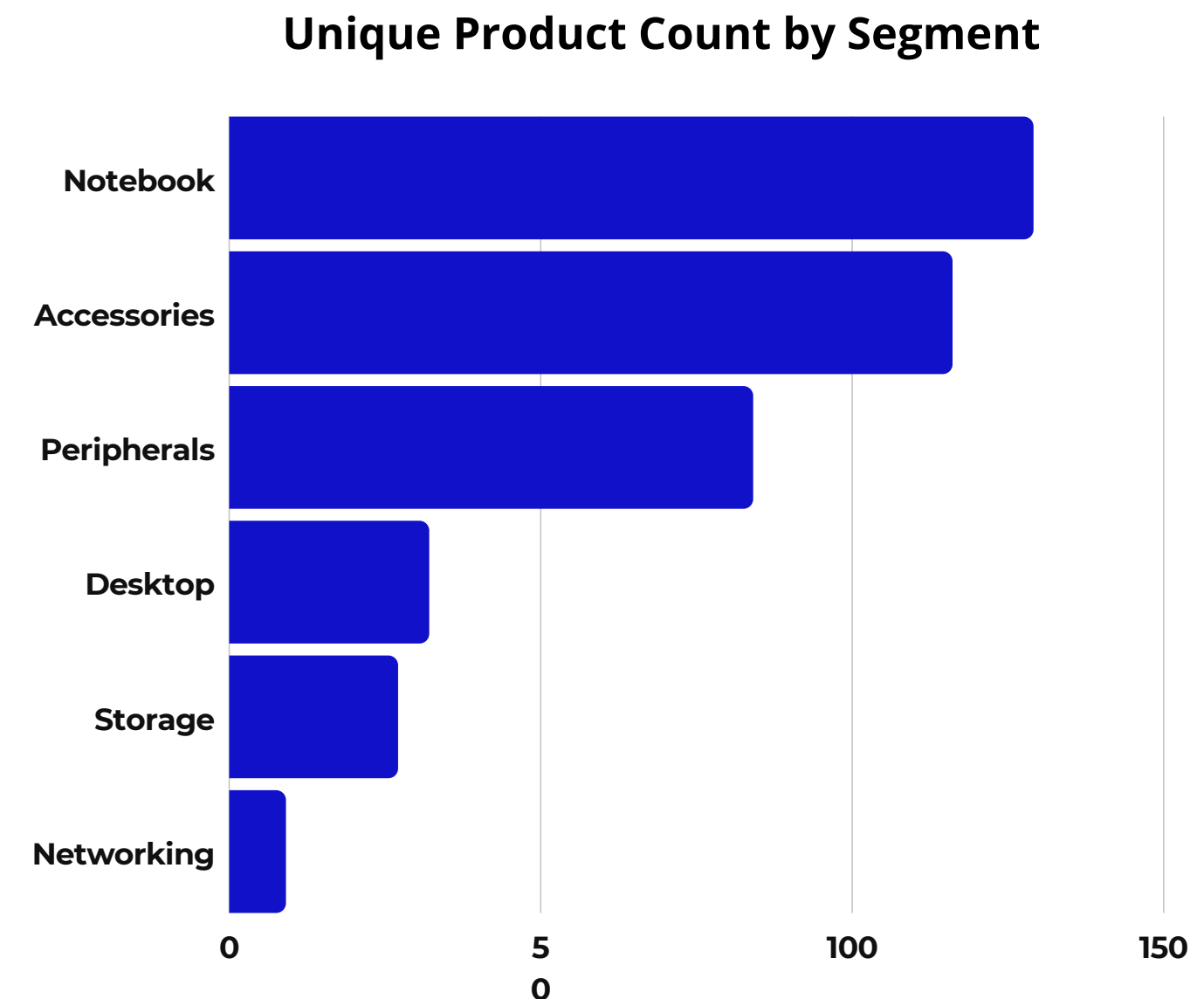
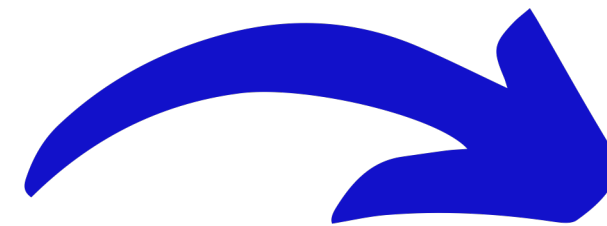
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Unique Products 2021

## Question 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

- Segments Notebook, Accessories, Peripherals take **83%** over all unique products. Those high numbers suggest that they are a prevalent and diverse product category, likely offering various specifications, features, and designs to cater to different consumer needs and preferences.
- However, segments like Desktop, Storage and Networking exhibit fewer product options, indicating potential areas where company could explore opportunities for expansion and innovation.

# Question 4

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

segment	unique_products_2020	unique_products_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

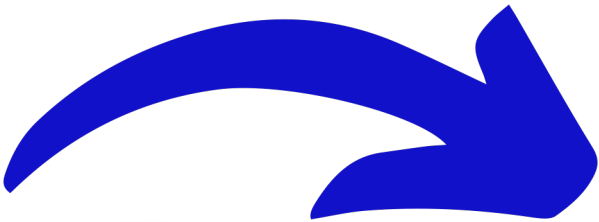
## INSIGHTS

- The **Accessories** segment experienced the **highest** increase in unique products, indicating a strong focus on diversifying accessory offerings to cater to consumer demands and technological advancements.
- **Storage**, while having the **lowest** number of unique products, still experienced growth.


# Question 5

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

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




\$240.5364



AQ HOME Allin1 Gen 2

\$0.8920



AQ Master wired x1 Ms

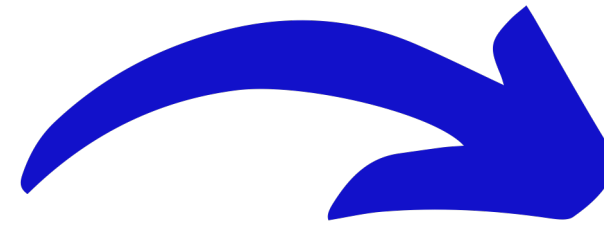
## INSIGHTS

- Mouse (AQ Master wired x1 Ms) has the lowest manufacturing cost.
- Personal Desktop (AQ Home Allin1 Gen2) has the highest manufacturing cost.

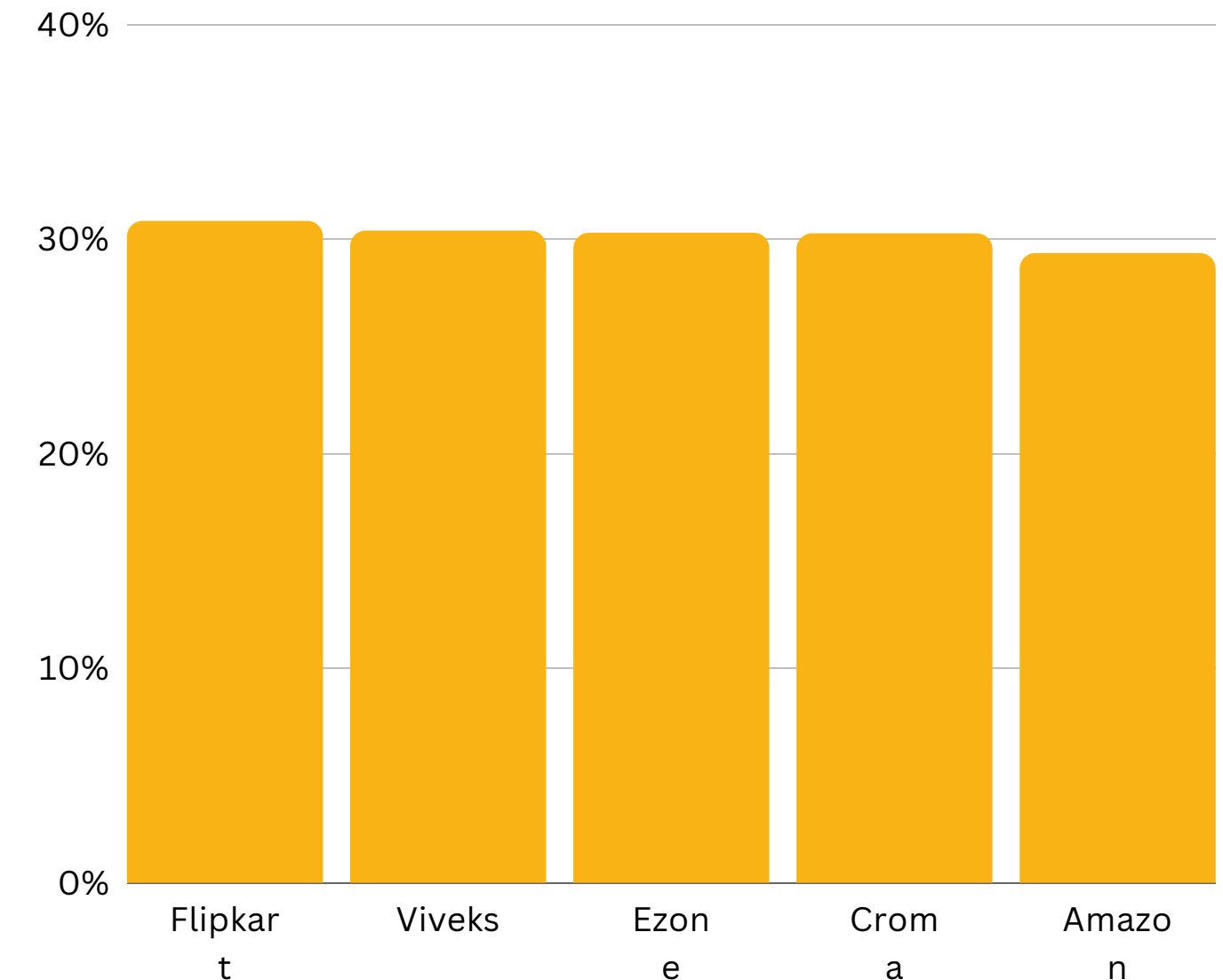


## Question 6

**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	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

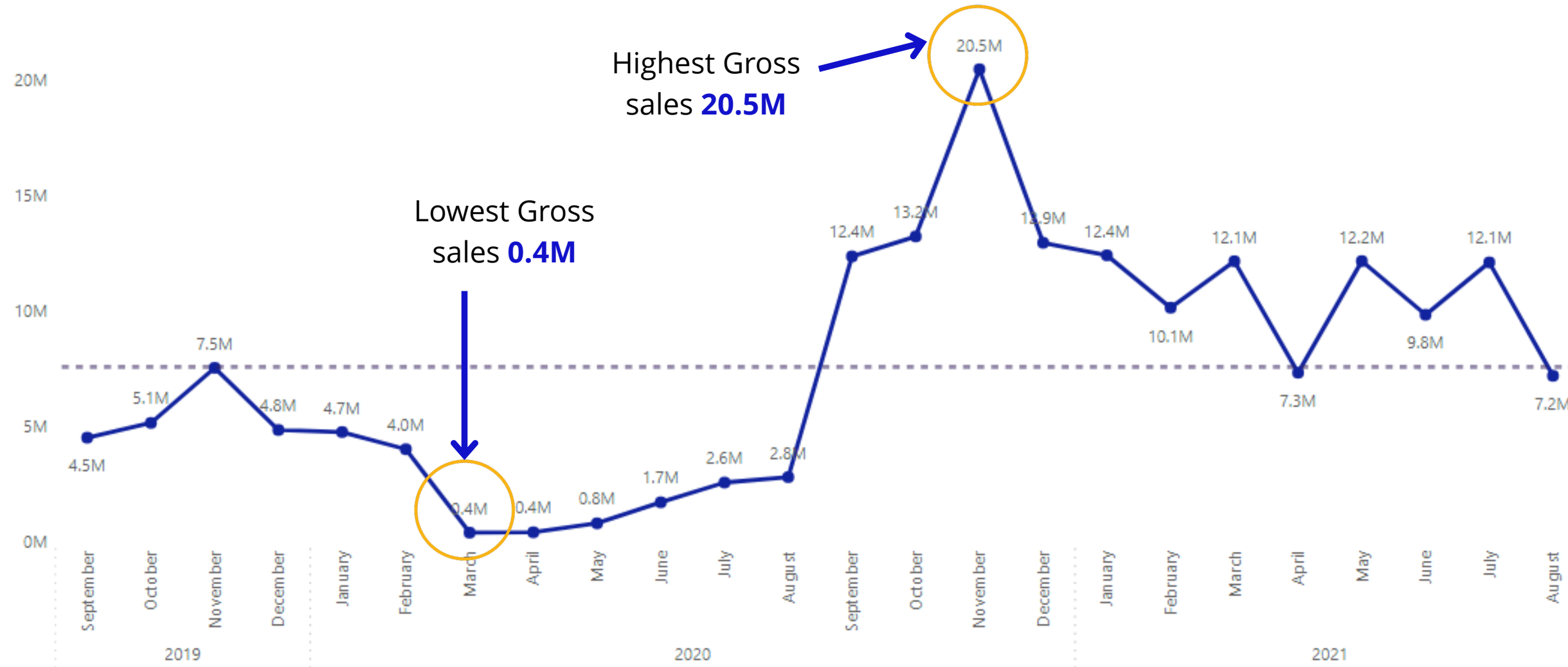


### INSIGHTS

- The largest average pre-invoice discount was given to **Flipkart**.
- The least average pre-invoice discount was given to **Amazon**.

## Question 7

Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month.



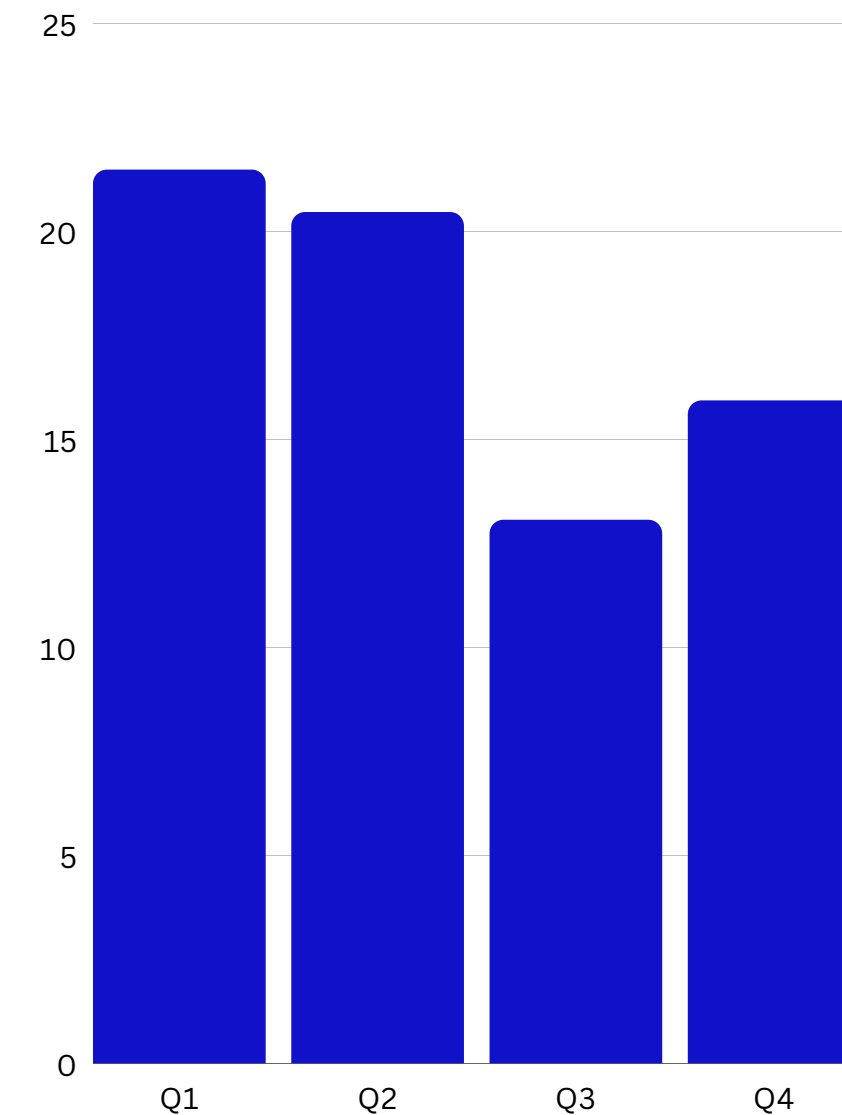
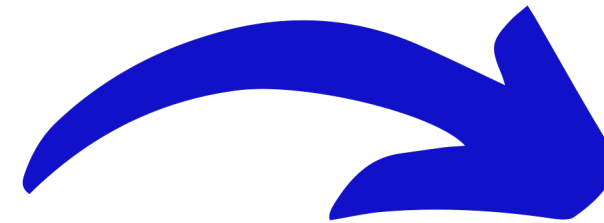
## INSIGHTS

- The lowest Gross sales total for both fiscal years is in **March (2020)**.
- The highest Gross sales total for both fiscal years is in **November (2020)**.
- **73.8%** of the total Gross sales figure is in **FY 2021**.

## Question 8

In which quarter of 2020, got the maximum total\_sold\_quantity?

Quarter	total_sold_quantity_in_millions
Q1	21.48
Q2	20.46
Q3	13.06
Q4	15.93



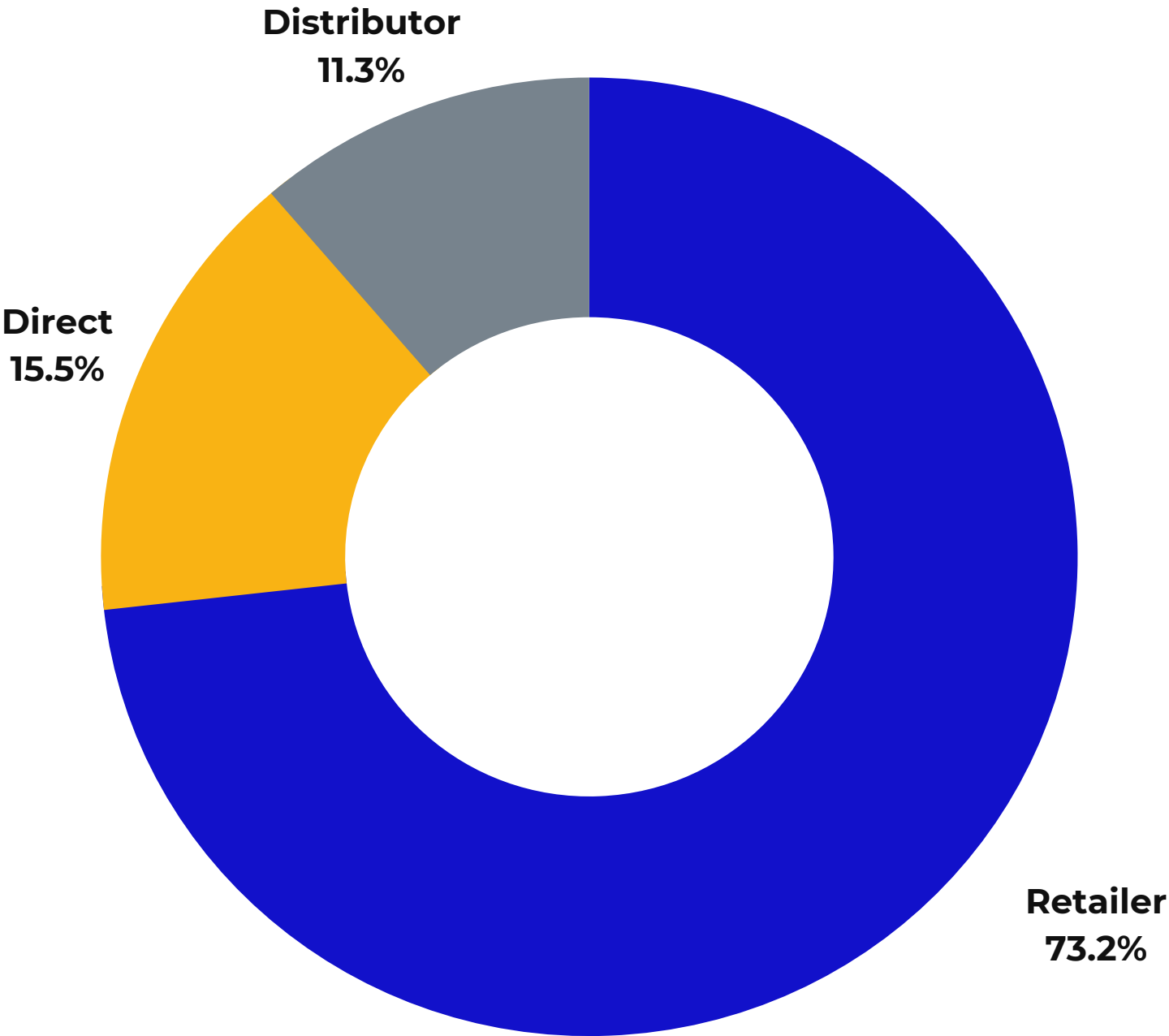
### INSIGHTS

- **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.

# Question 9

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

channel	gross_sales_in_millions	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.3



## INSIGHTS

- Channel: "Retailer" helped bring maximum sales to the company with 73.22% as the contribution percentage.
- Channel: "Distributor" makes the least contribution at a percentage of 11.31%.



## Question 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 [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

- Every division has a product with **different variants** that appears twice in the top three products by division list.



**THANK YOU**