

Consumer Goods Ad-hoc Insights



AGENDA



- Background/ context.
- Getting familiar with Atliq's Business Model – Their Markets and Product lines.
- Getting familiar with Input data.
- Ad-hoc requests along with the Queried Results, Visualizations and Insights.

BACKGROUND/CONTEXT

- **Our Company**

Atliq Hardware's (fictitious company) – one of the leading computer hardware producers in India.

- **Background**

The management noticed that they do not get enough insights to make quick and smart data-informed decisions.

- **Problem**

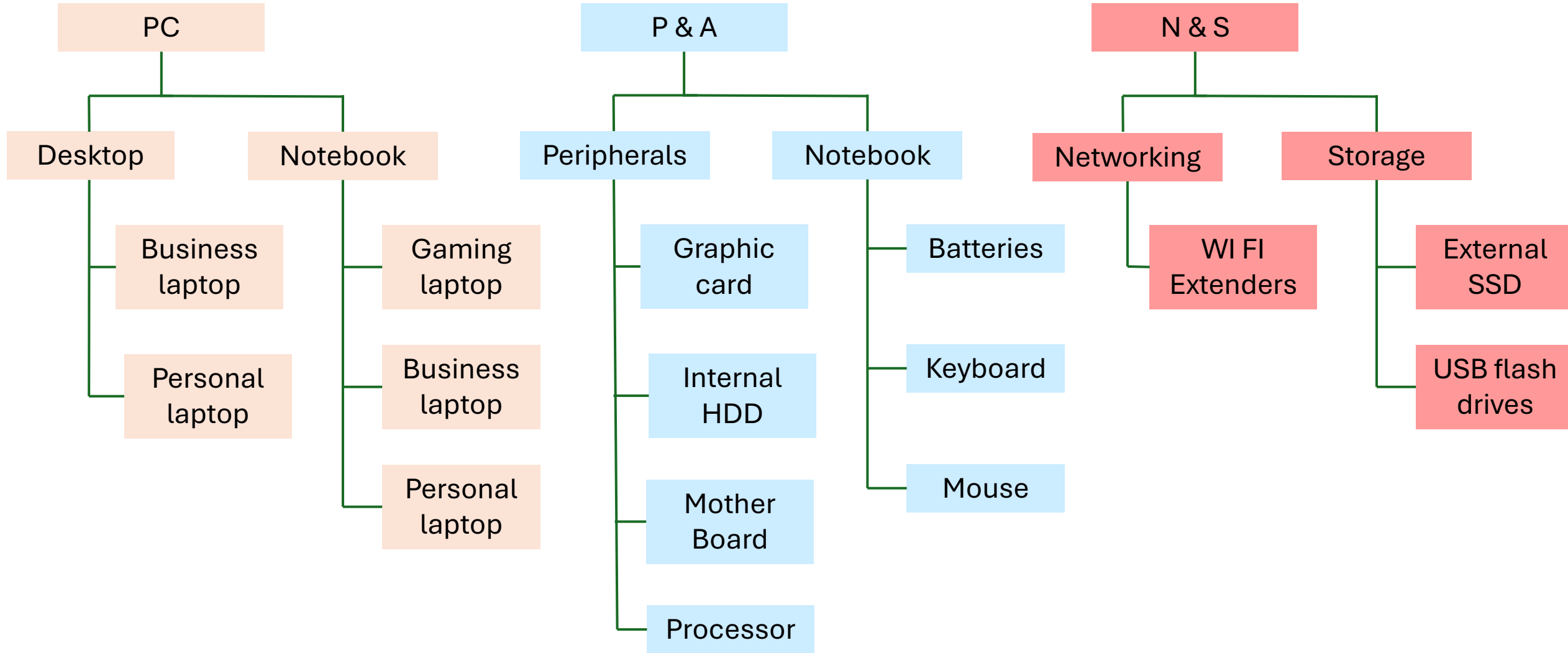
There are 10 ad-hoc requests for which the company needs insights.

- **Approach**

Run a SQL query to answer these requests. Convert it into visualizations and present the insights to the top-level management.

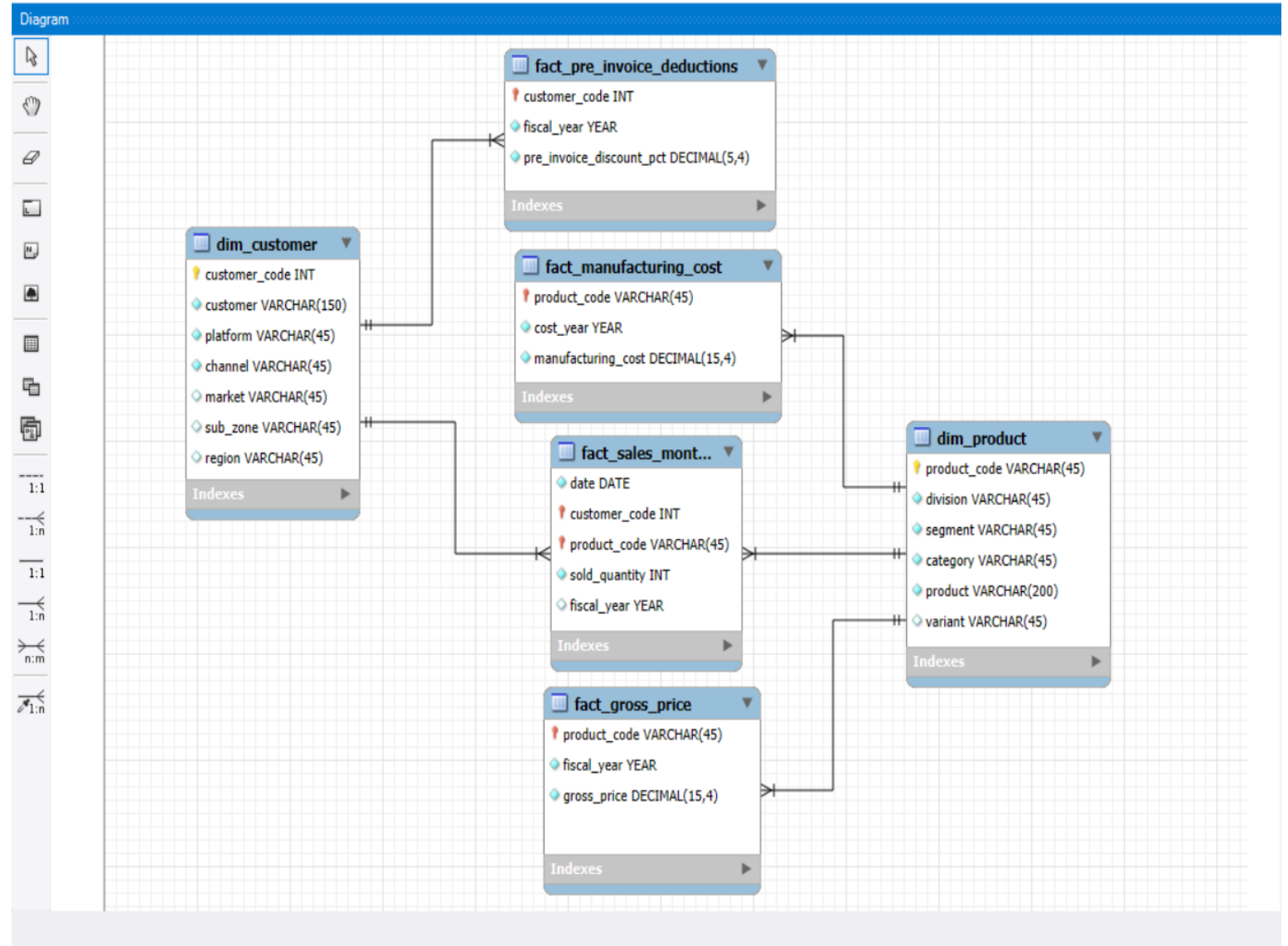



Atliq's product Classification



Getting familiar with Input data.

- Input data consists of sales data for FY 2020 and FY 2021, along with different other dimension tables like customer details, product details,.etc.






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

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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

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Ad-hoc Requests

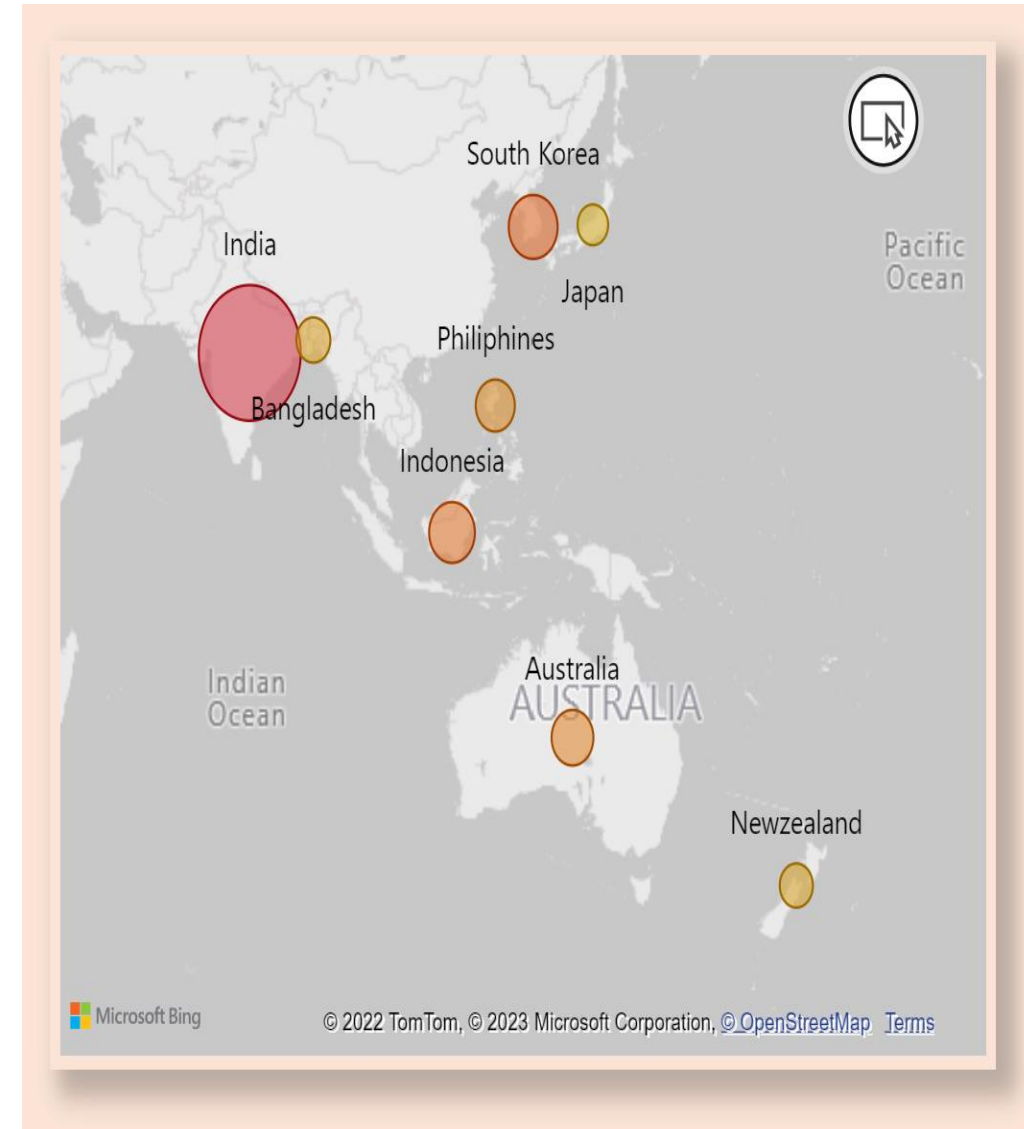
Let's dive into the Queried results, Visualizations, and Insights.

#Req-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
	Newzealand
	Bangladesh

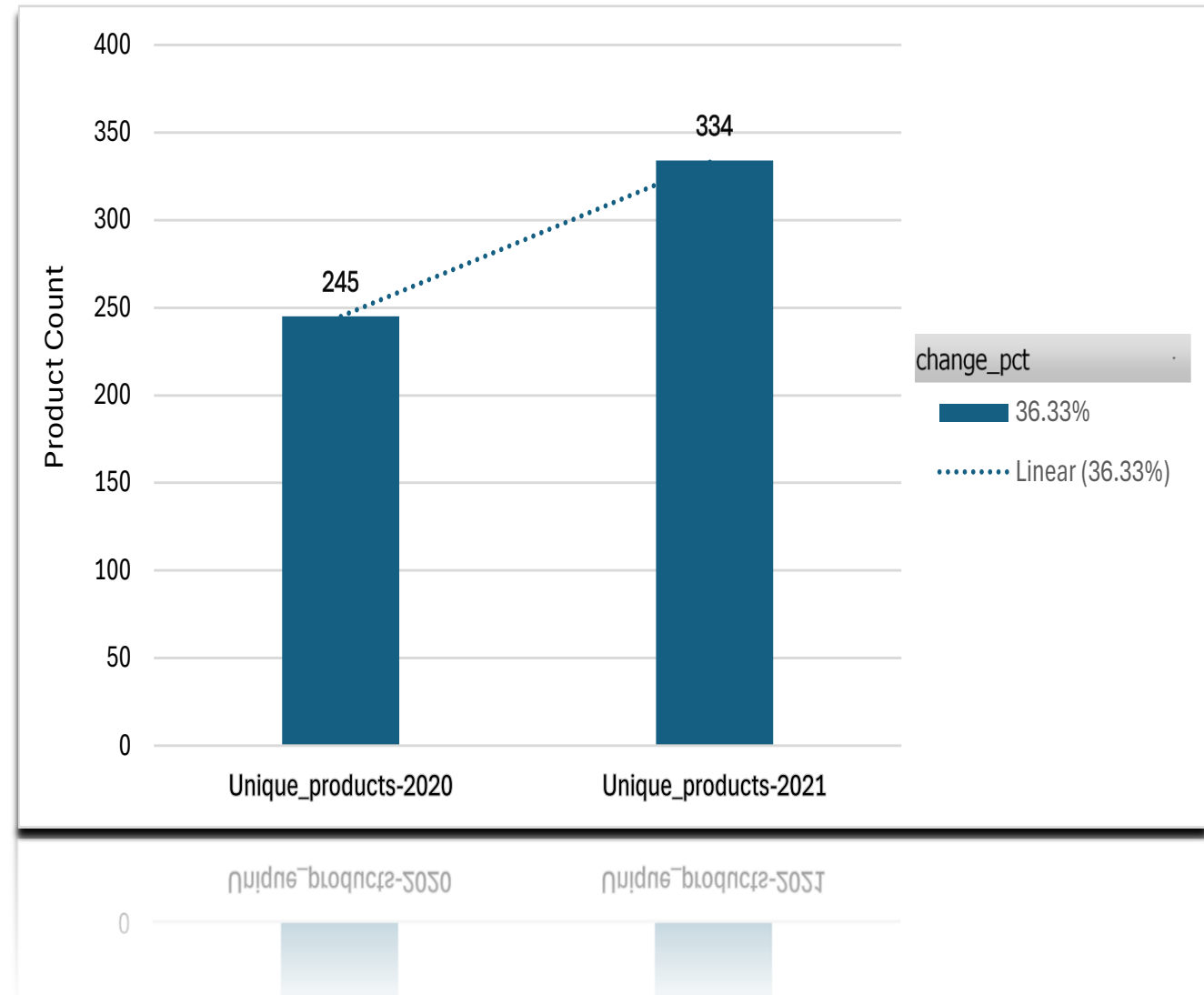
	Bangladesh
	Newzealand
	Australia
	South Korea
	Philippines

- These are the '8' countries in the 'APAC' region where Atliq Exclusive operates its business.
- Overall, Atliq sold 3.85 million goods in the "APAC" region in FY 2020 and FY 2021. India had the most products sold (1.9 million) out of all the countries in this region, while Japan had the fewest (0.06 million).



#Req-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

- Count of Unique products in FY-2020: '245'
- Count of Unique products in FY-2021: '334'
- **Insight:** "Atliq demonstrated a 33.6% increase in unique products By releasing new items in 2021 compared to 2020", This indicates a strong push for innovation, which enhances the company's growth potential and strengthens its competitive edge in the market.



#Req-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,

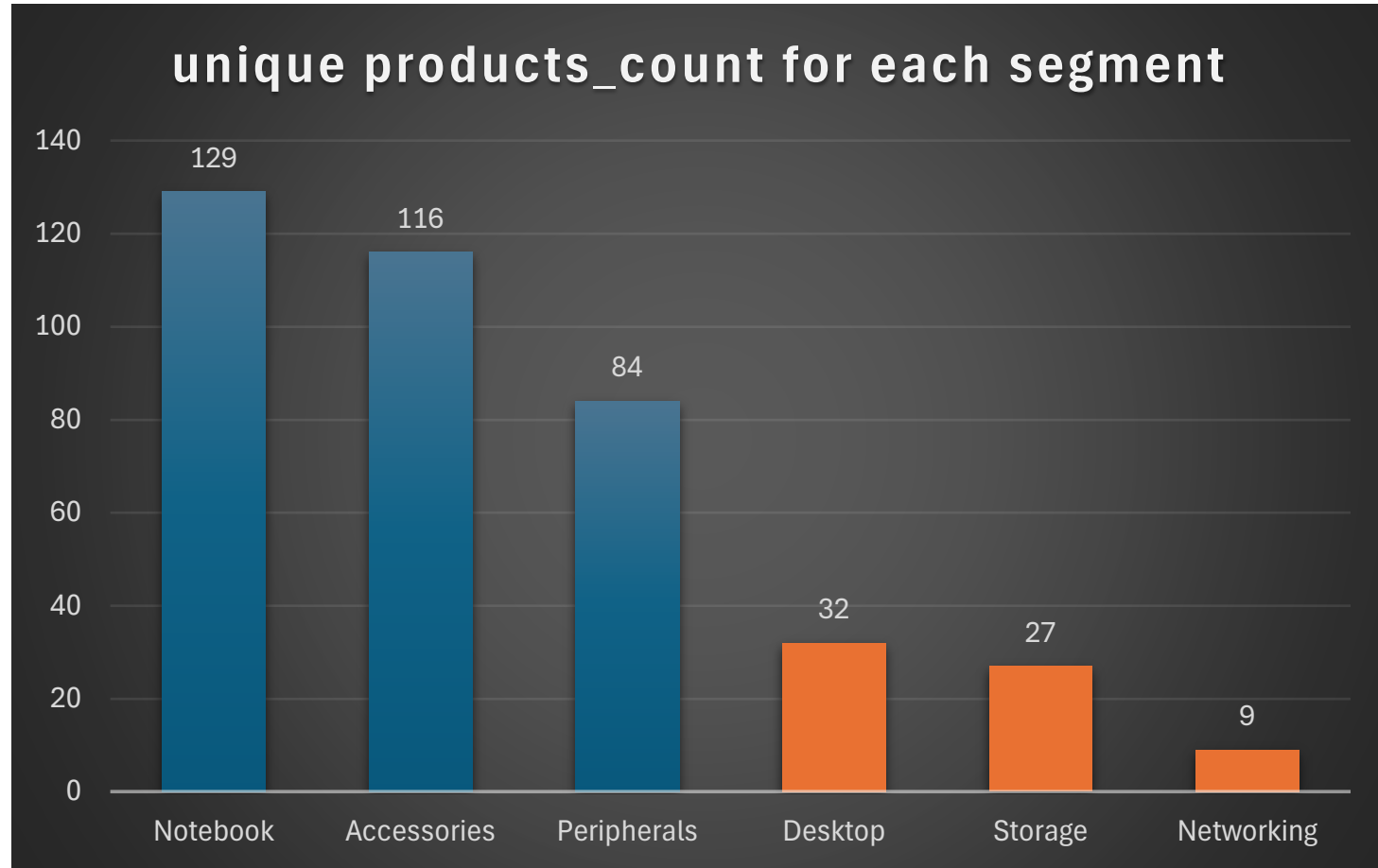
Segment,

product_count

- After drill-down to each segment, it's evident that Notebooks, Accessories, and peripherals are averaging around 110, whereas the remaining three segments are lagging with an average of 23 products per segment.
- To boost sales and provide a wider range of products for consumers, production should concentrate on new developments in these three areas (desktop, storage, and networking).

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








	Networking	9
	Storage	27

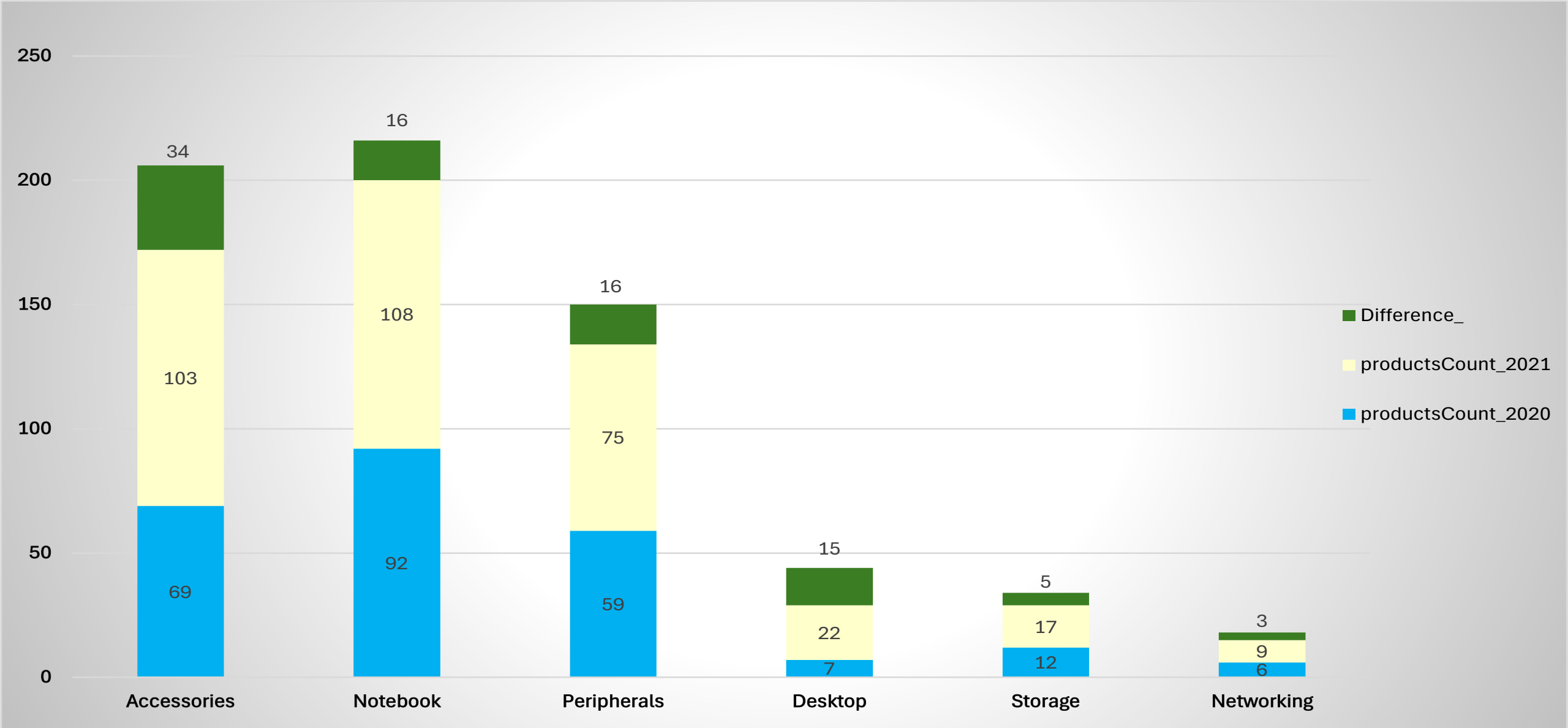


Insight: "The **Notebook**, **Accessories**, and **Peripherals** segments show strong product diversity and growth in production compared to other segments. However, **Desktop**, **Storage**, and **Networking** segments lag behind and require increased focus on manufacturing growth across various product categories to enhance overall performance."

#Req-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 	productsCount_2020	productsCount_2021	Difference_	
Accessories	69	103	34	
Peripherals	59	75	16	
Notebook	92	108	16	
Desktop	7	22	15	
Storage	12	17	5	
Networking	6	9	3	



- ❑ Out of all the product categories, Accessories has seen the newest product introductions.
- ❑ By developing new products, Storage & Networking is increasing its production at a very modest rate.

#Req-5: Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,

- product code,
- product,
- manufacturing cost

Highest Manufacturing Cost

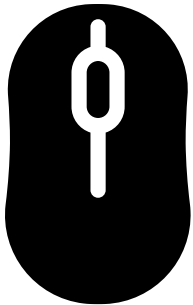
\$ 240.54



A6120110206
AQ HOME Allin1 Gen 2 (Plus 3)
Category: personal Desktop

Lower Manufacturing Cost

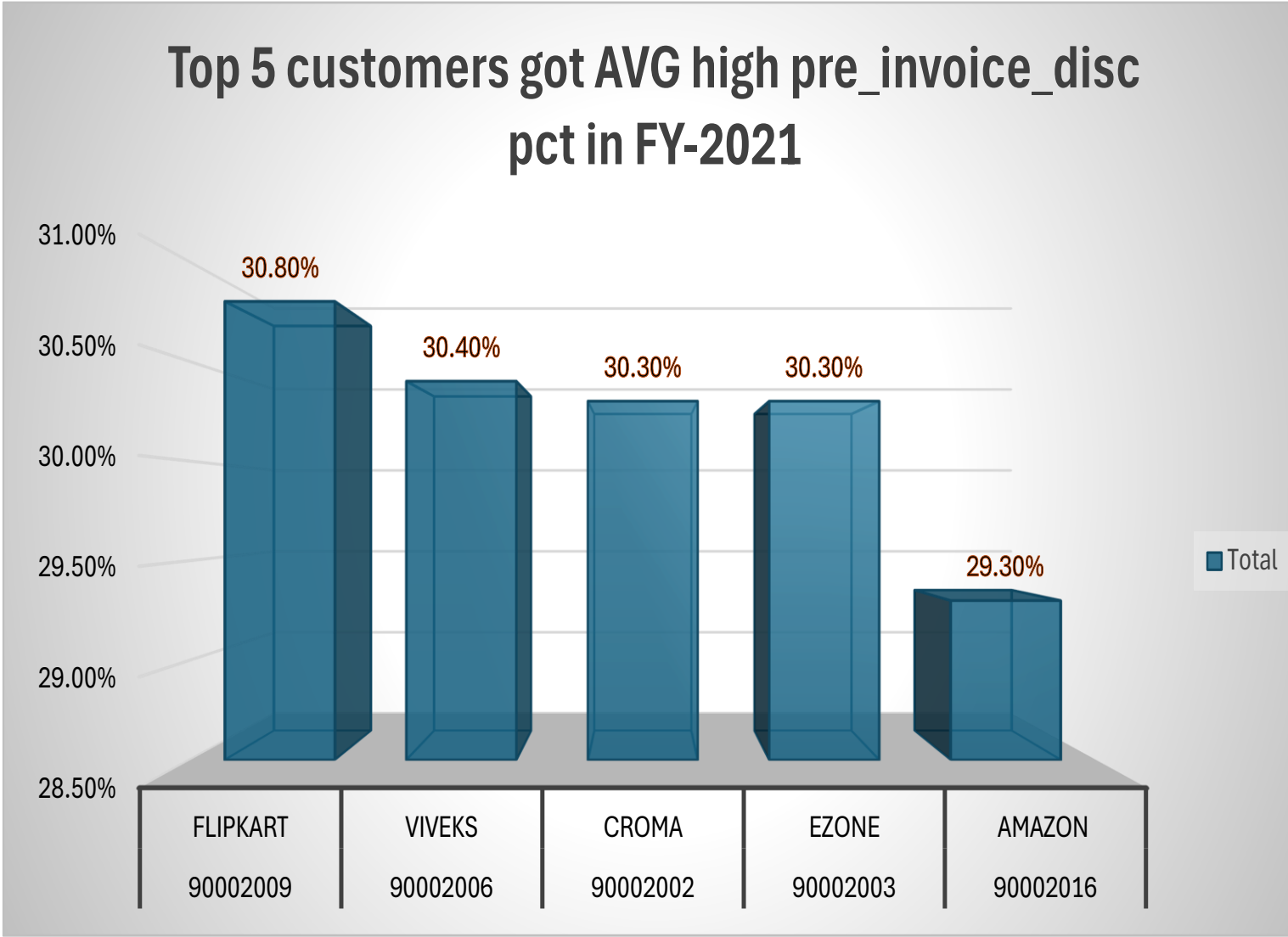
\$ 0.89



A2118150101
AQ Master wired x1 Ms
(Standard)
Category: Mouse

#Req-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

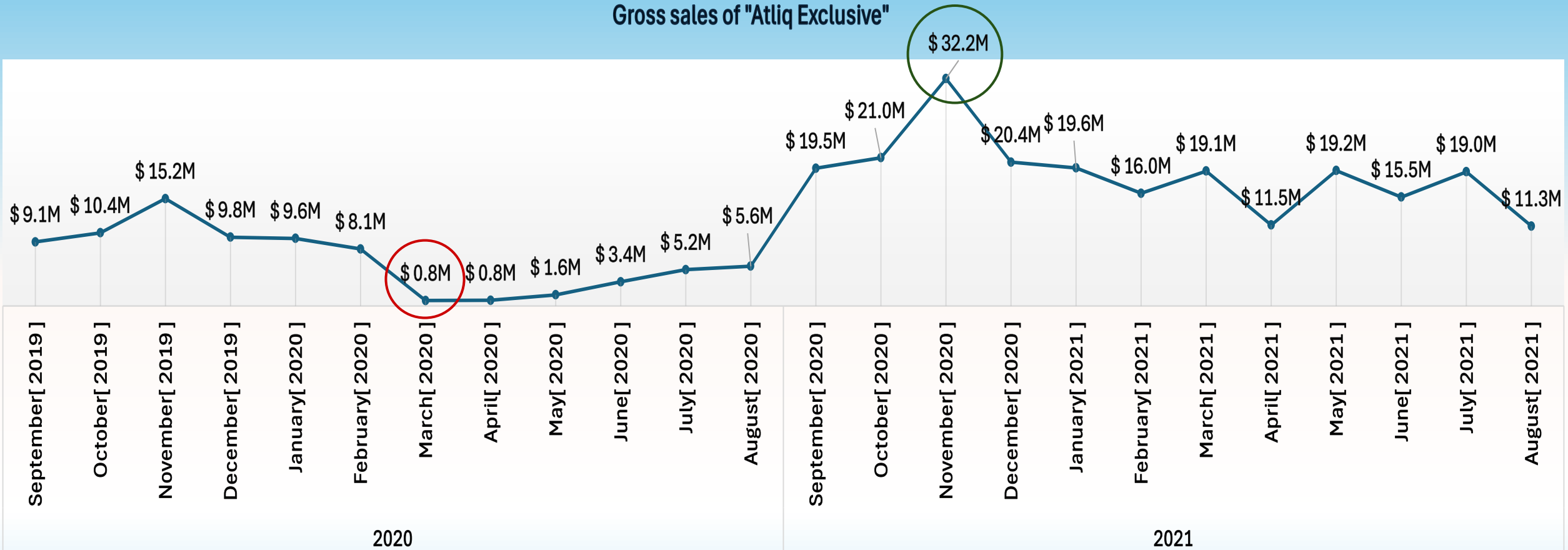
- ❑ The highest avg_pre_Invoice_discount_pct was given to “FLIPKART”.
- ❑ The lowest avg_pre_Invoice_discount_pct was given to “AMAZON”.



#Req-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 make strategic decisions. The final report contains these columns: Month, Year, & Gross sales Amount.

year	Gross Sales
2020	\$ 79.5M
September[2019]	\$ 9.1M
October[2019]	\$ 10.4M
November[2019]	\$ 15.2M
December[2019]	\$ 9.8M
January[2020]	\$ 9.6M
February[2020]	\$ 8.1M
March[2020]	\$ 0.8M
April[2020]	\$ 0.8M
May[2020]	\$ 1.6M
June[2020]	\$ 3.4M
July[2020]	\$ 5.2M
August[2020]	\$ 5.6M
2021	\$ 224.4M
September[2020]	\$ 19.5M
October[2020]	\$ 21.0M
November[2020]	\$ 32.2M
December[2020]	\$ 20.4M
January[2021]	\$ 19.6M
February[2021]	\$ 16.0M
March[2021]	\$ 19.1M
April[2021]	\$ 11.5M
May[2021]	\$ 19.2M
June[2021]	\$ 15.5M
July[2021]	\$ 19.0M
August[2021]	\$ 11.3M

Gross sales of "Atliq Exclusive"





Insight:

- "In both FY-20 and FY-21, Atliq Exclusive saw a drastic decline in sales during March 2020, dropping to \$0.8 million due to the impact of COVID-19 and the global chip shortage. However, post-lockdown, sales steadily grew month by month. Notably, November recorded the highest gross sales in both fiscal years (2020 and 2021)."

#Req-8: In which quarter of 2020, got the maximum total sold quantity? The final output contains these fields sorted by the total_sold_quantity.

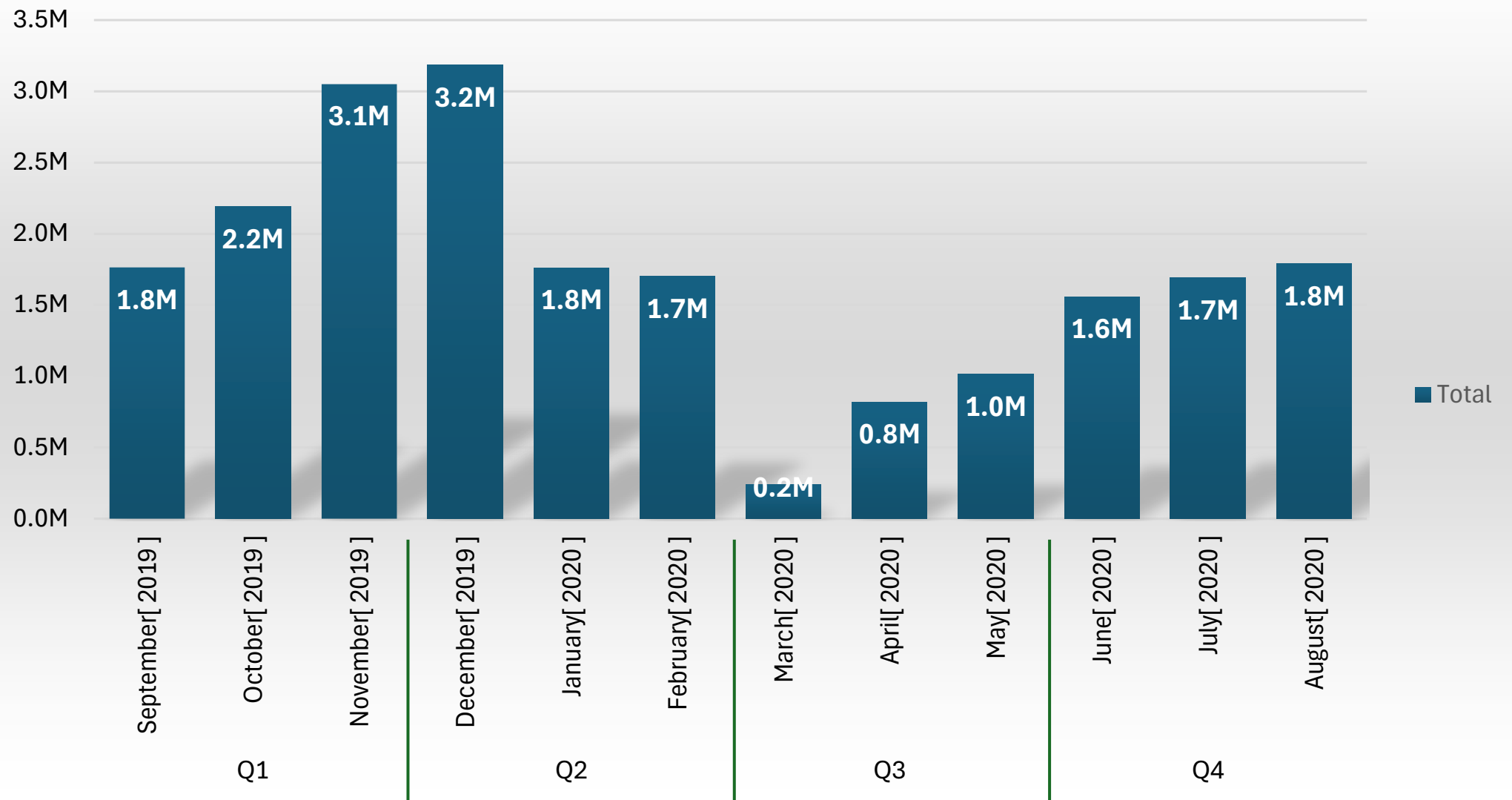
Quarter,

total_sold_quantity

Quarterly	TotalQuantity
Q1	7.0M
September[2019]	1.8M
October[2019]	2.2M
November[2019]	3.1M
Q2	6.6M
December[2019]	3.2M
January[2020]	1.8M
February[2020]	1.7M
Q3	2.1M
March[2020]	0.2M
April[2020]	0.8M
May[2020]	1.0M
Q4	5.0M
June[2020]	1.6M
July[2020]	1.7M
August[2020]	1.8M

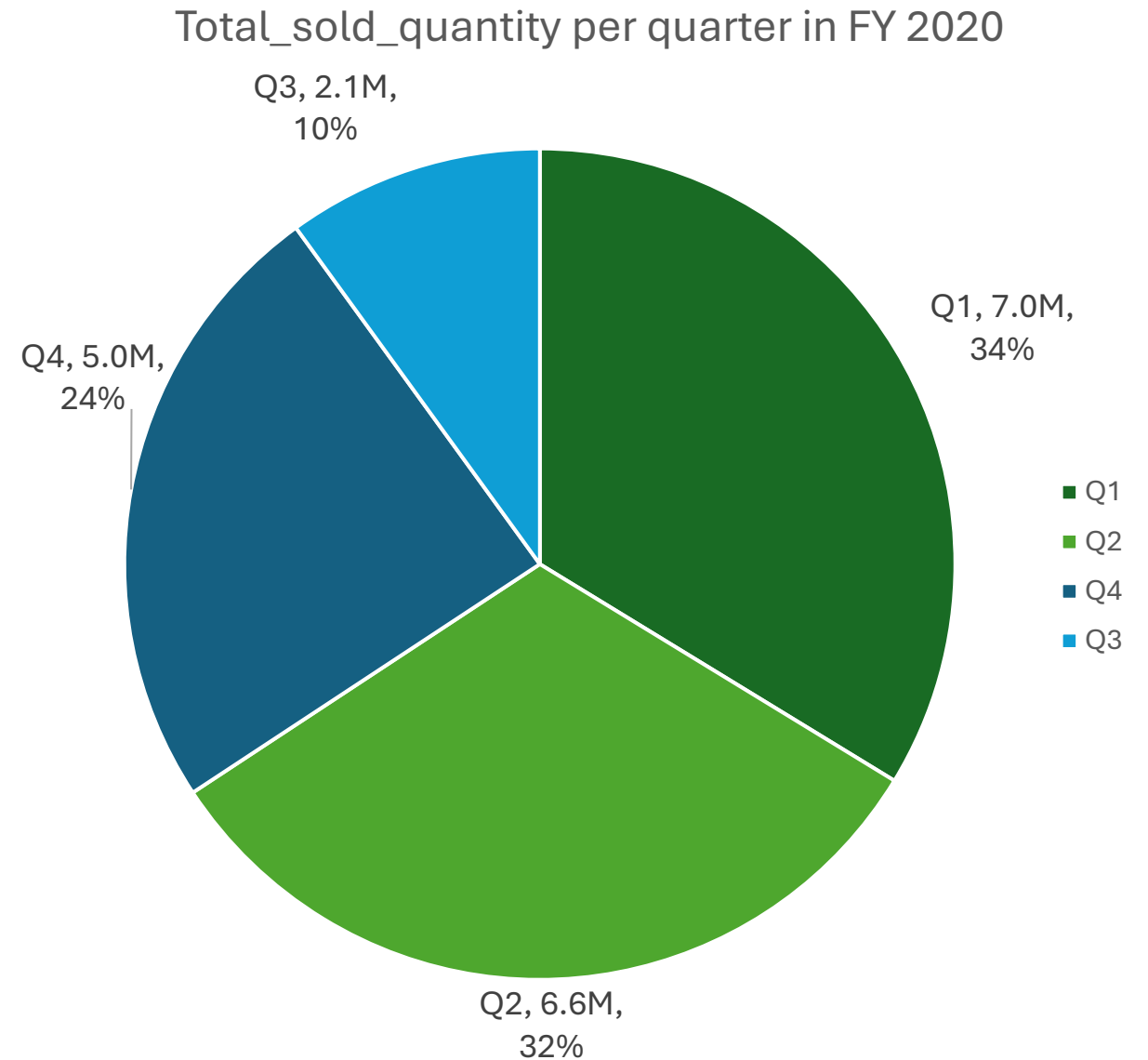
	Quarter	total_sold_quantity
▶	Q1	7005619
	Q2	6649642
	Q4	5042541
	Q3	2075087

Total_sold_quantity in FY-2020



Insight: "In FY-2020, Q3 (March, April, May) recorded the lowest sales with 2.1 million units sold, accounting for just 10% of the total sold quantity, primarily due to the impact of COVID-19. In contrast, Q1 was the highest contributor, with 7 million units sold, representing 34% of the total sales for the year."

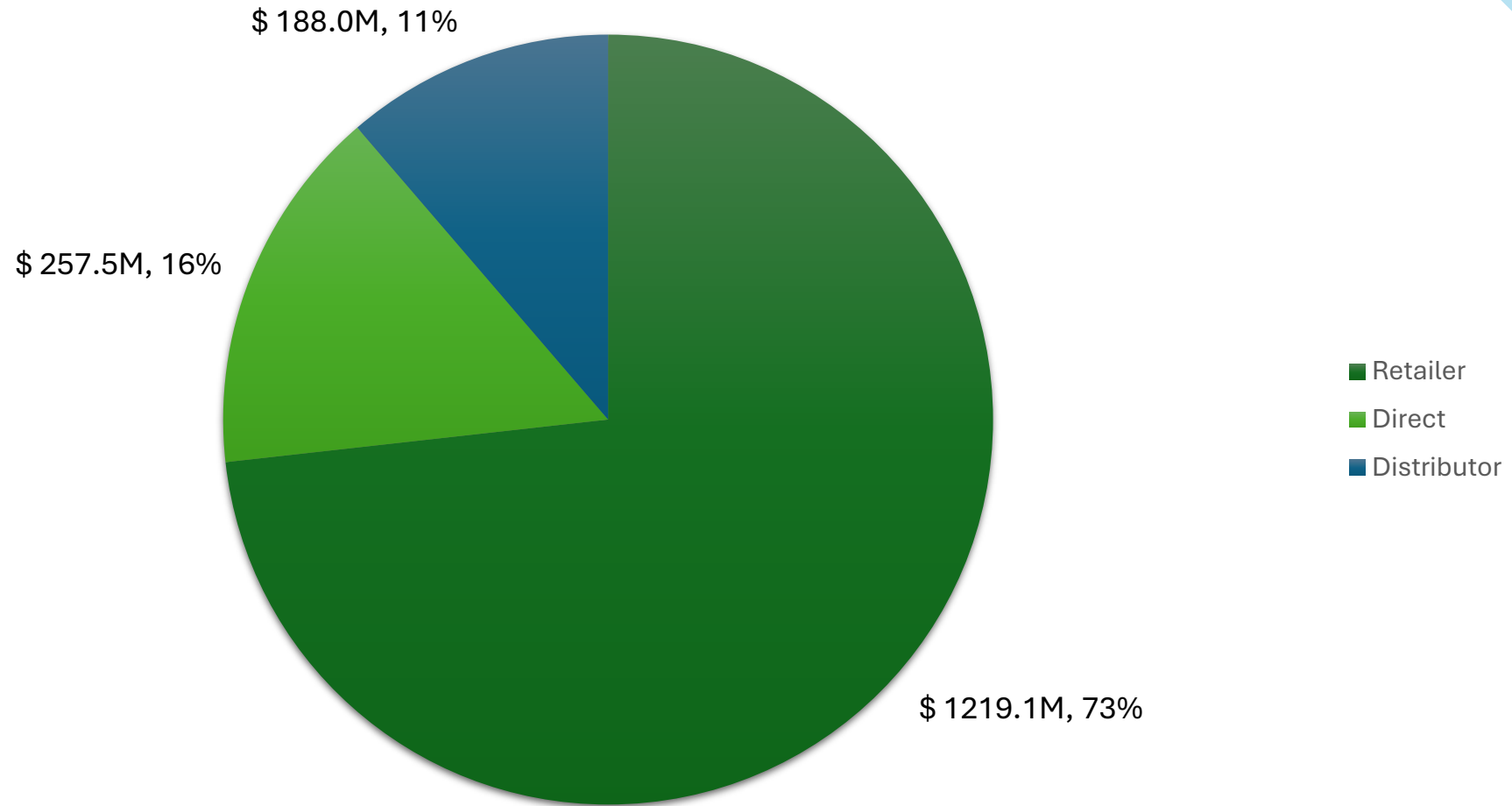
➤ To mitigate future declines in Q3, the company should consider offering discounts or promotional offers during this period to boost sales."




#Req-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_M	pct
Retailer	\$ 1219.1M	73.23%
Direct	\$ 257.5M	15.47%
Distributor	\$ 188.0M	11.30%
Grand Total	\$ 1664.6M	100.00%
Grand Total	\$ 1664.6M	100.00%
Distributor	\$ 188.0M	11.30%

Gross_sales_Mln generated by Channel wise on FY-2021





Insight: "The **Retailer** channel generated the highest gross sales at \$1,219.1 million, contributing 73% of the total sales. In contrast, the **Distribution** channel reported the lowest sales, with only **\$188.0** million, representing just **11%** of the total."

- **My Opinion:** When Atliq expands into other countries through the **Distribution** channel, they should indeed focus on understanding **customer behavior** in those regions. This includes analyzing local preferences, purchasing habits, and the strength of competitors.
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#Req-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 [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

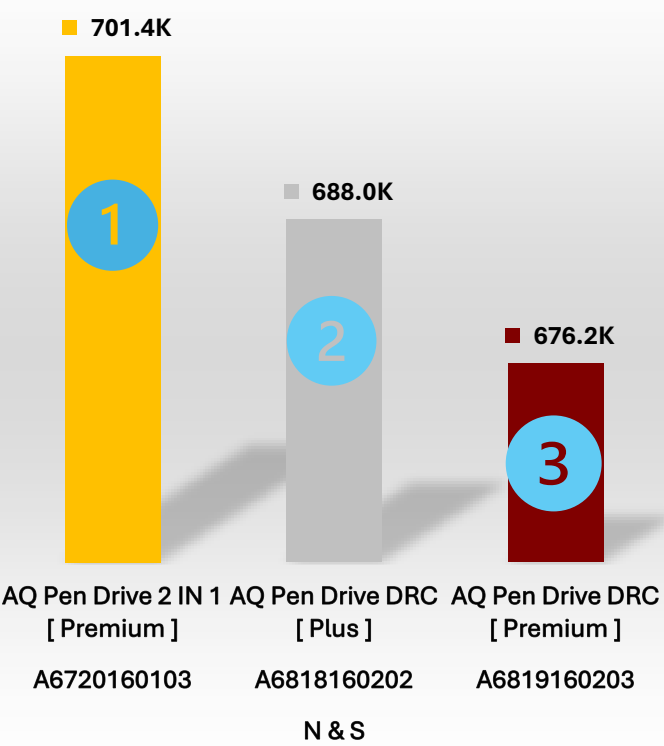
	PC	A4218110208	AQ Digit [Premium Misty Green]	17275	3
	PC	A4319110306	AQ Velocity [Plus Red]	17280	2

The “Pendrive” is the most selling product in N&S division, which were around 7 lakh in quantity.

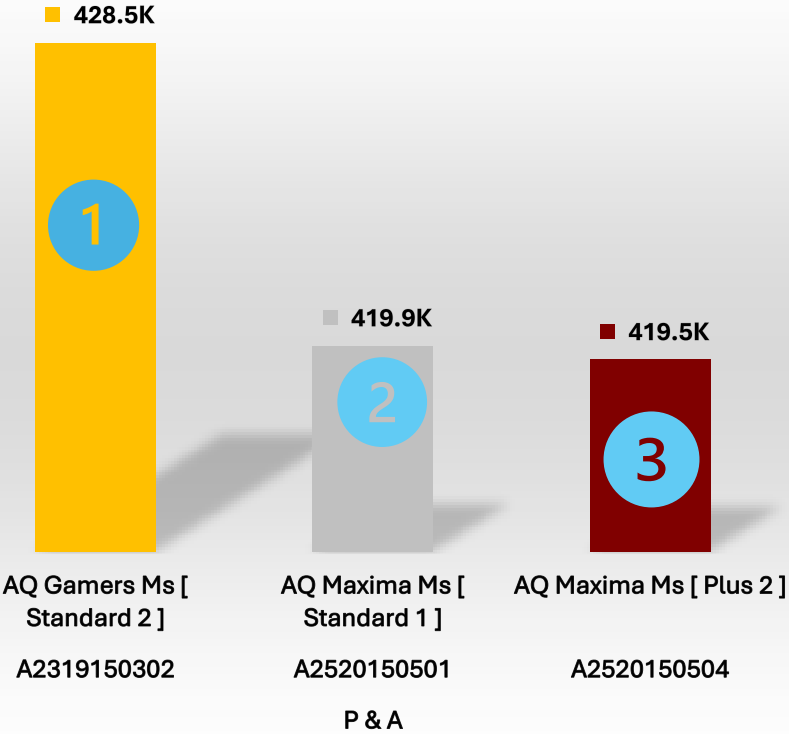
The “Mouse” is the most selling product in P&A division, which were around 4 lakh in quantity.

The “Personal Laptops” is the most selling product in N&S division, which were around 17 Thousands in quantity.

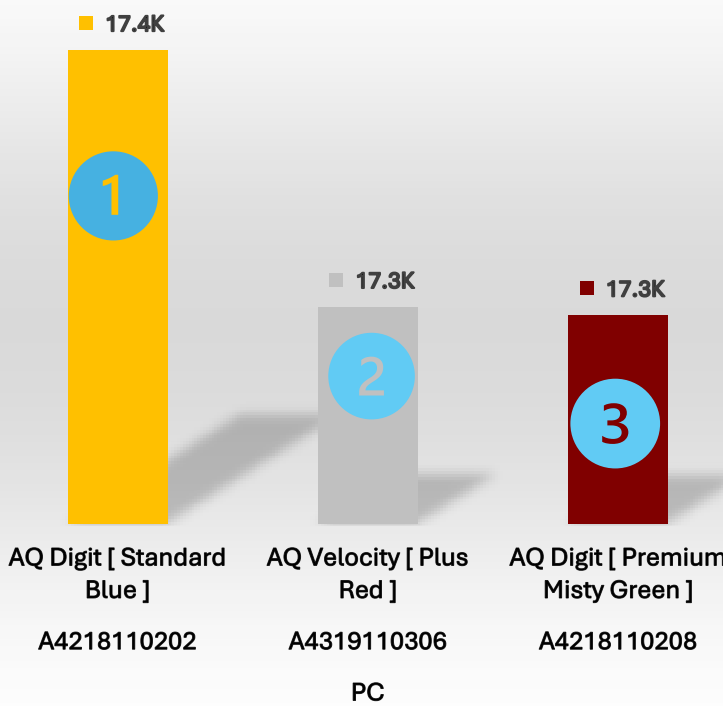
Top 3 products in N&S division



Top 3 products in P&A division



Top 3 products in PC division



**END
THANKYOU**



