

# AtliQ Hardware

A photograph of a modern office environment. Several people are seated at white desks, working on computers. In the foreground, a man with a beard and short hair is seen from the side, looking at a computer screen. Another computer screen displays the text "DESIGNERS SHOULD ALWAYS KEEP THEIR USERS IN MIND". A third computer screen shows a presentation slide with the text "Use relevant charts and graphs", "Makes data more memorable", "Adds more context to the topic", and "Supports your claims". The office has large windows in the background, and the overall atmosphere is professional and focused.

AD\_HOC INSIGHTS

CONSUMER GOODS

Created By

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# OVERVIEW

- WHY? ( Objectives OF the Project )
- WHAT? ( Company Details & their Markets )
- HOW? ( Tools And Technologies Used )
- Request 1
- Request 2
- Request 3
- Request 3
- Request 4
- Request 5
- Request 6
- Request 7
- Request 8
- Request 9
- Request 10

# Objectives

- AtliQ Hardware (an imaginary corporation) is a manufacturing company in India that sells hardware like PCs, mice, and laptops to various customers in India and abroad.
- However, the management noticed that they were not getting enough insights to make smart, quick, and data-informed decisions.
- They want to expand their Data Analytics team by hiring several junior data analysts.
- Tony Sharma, their Data Analytics Director, wants to hire someone who is good at both technical and soft skills.
- Hence, Tony Sharma decided to conduct a SQL challenge to identify which candidate would best meet their requirements.
- The company is looking for 10 ad-hoc requests with insights and recommendations

WHAT?

# Company Details

AtliQ Hardware is a Computer & Accessories manufacturer

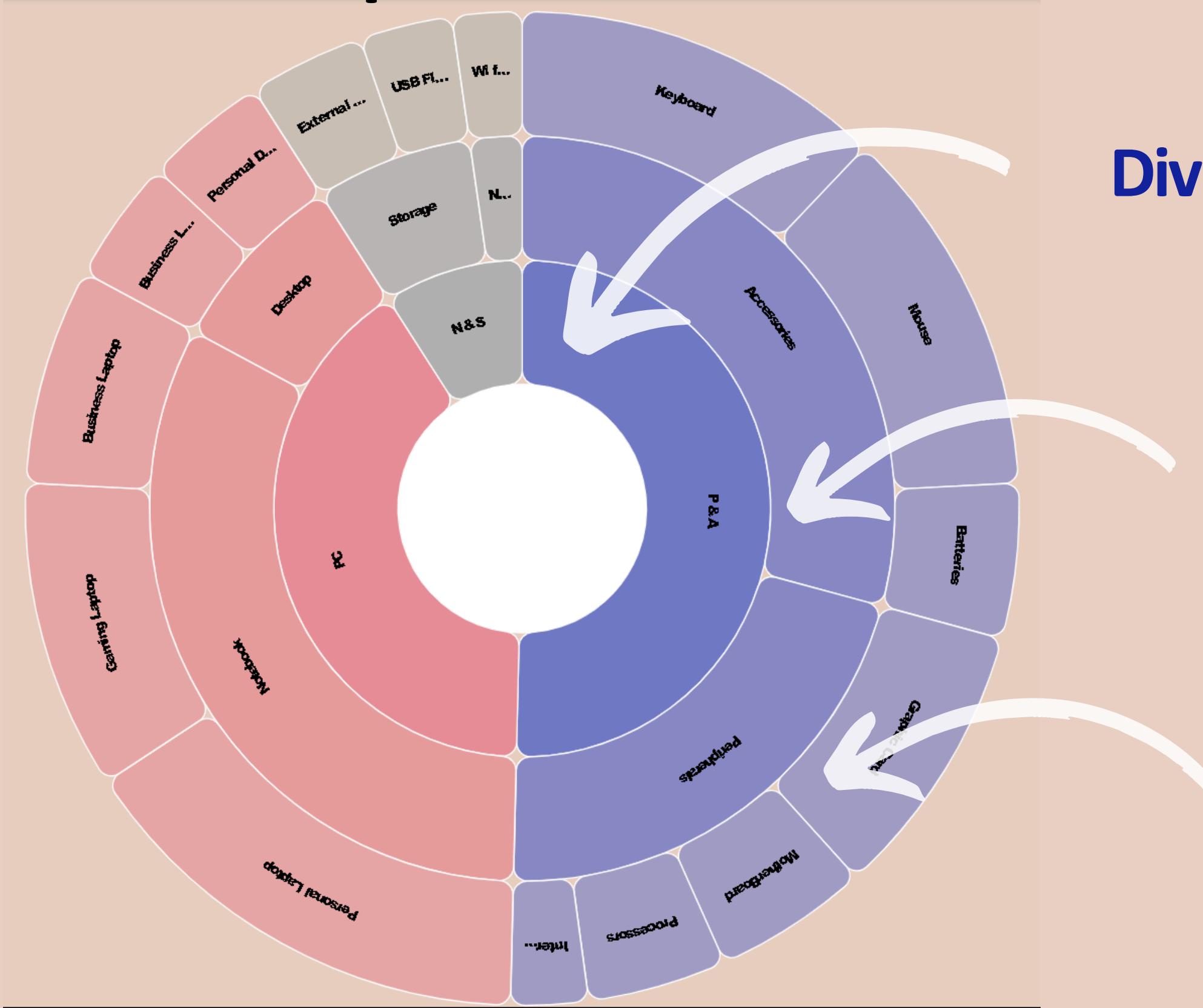
Fiscal Year

September 2019 - August 2020

FY 2020

September 2020 - August 2021

FY 2021

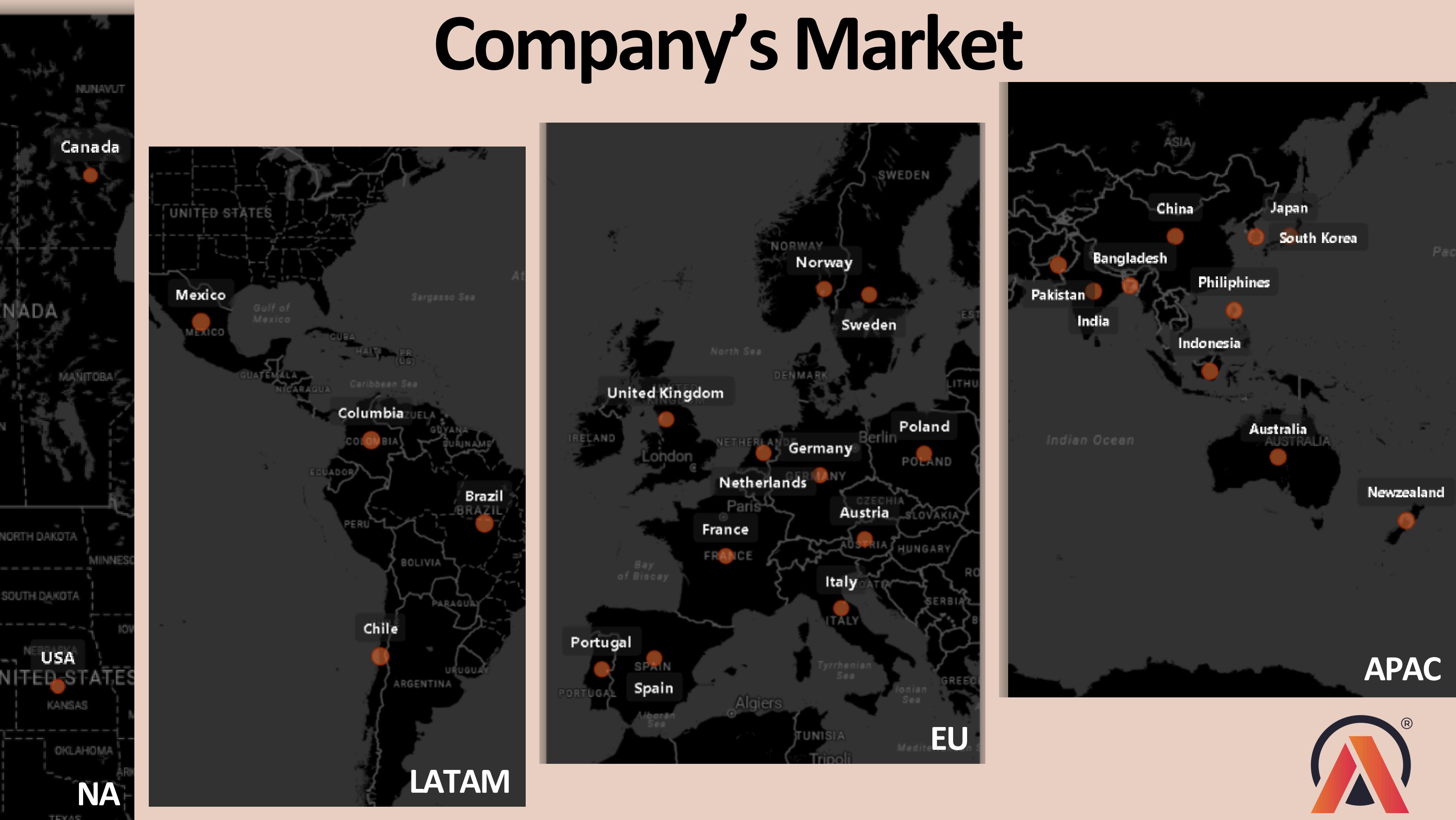


Category

Segment

Division

# Company's Market



HOW?

# Data , Requests and Tools & Technologies

**Codebasics SQL Challenge**

**Requests:**

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

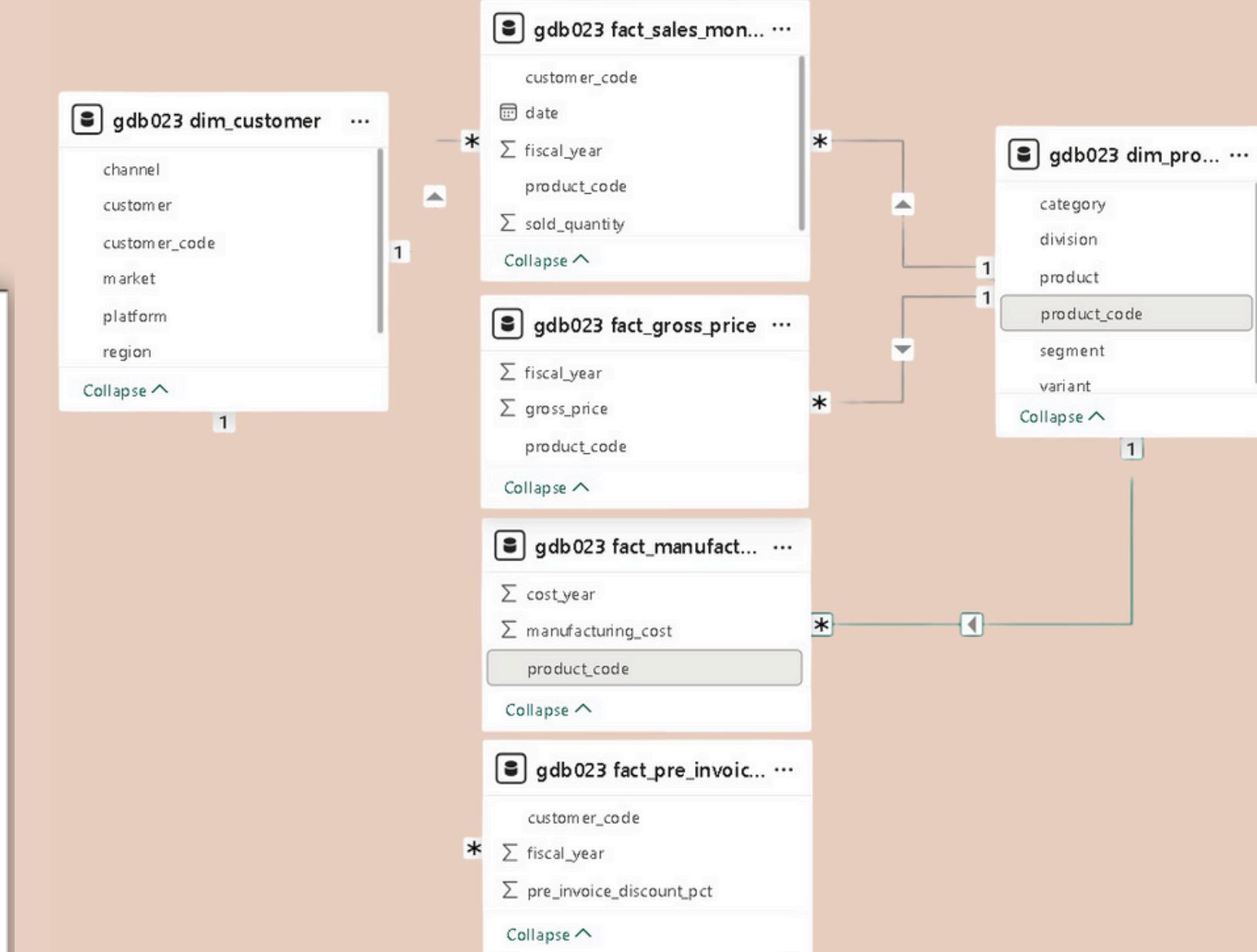
7. Get the complete report of the Gross sales amount for the customer "Atliq Exclusive" for each month. This analysis helps to get an idea of low and high-performing months and take strategic decisions.  
The final report contains these columns:  
Month  
Year  
Gross sales Amount

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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For Analysis and visualization



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

market

Australia

Bangladesh

India

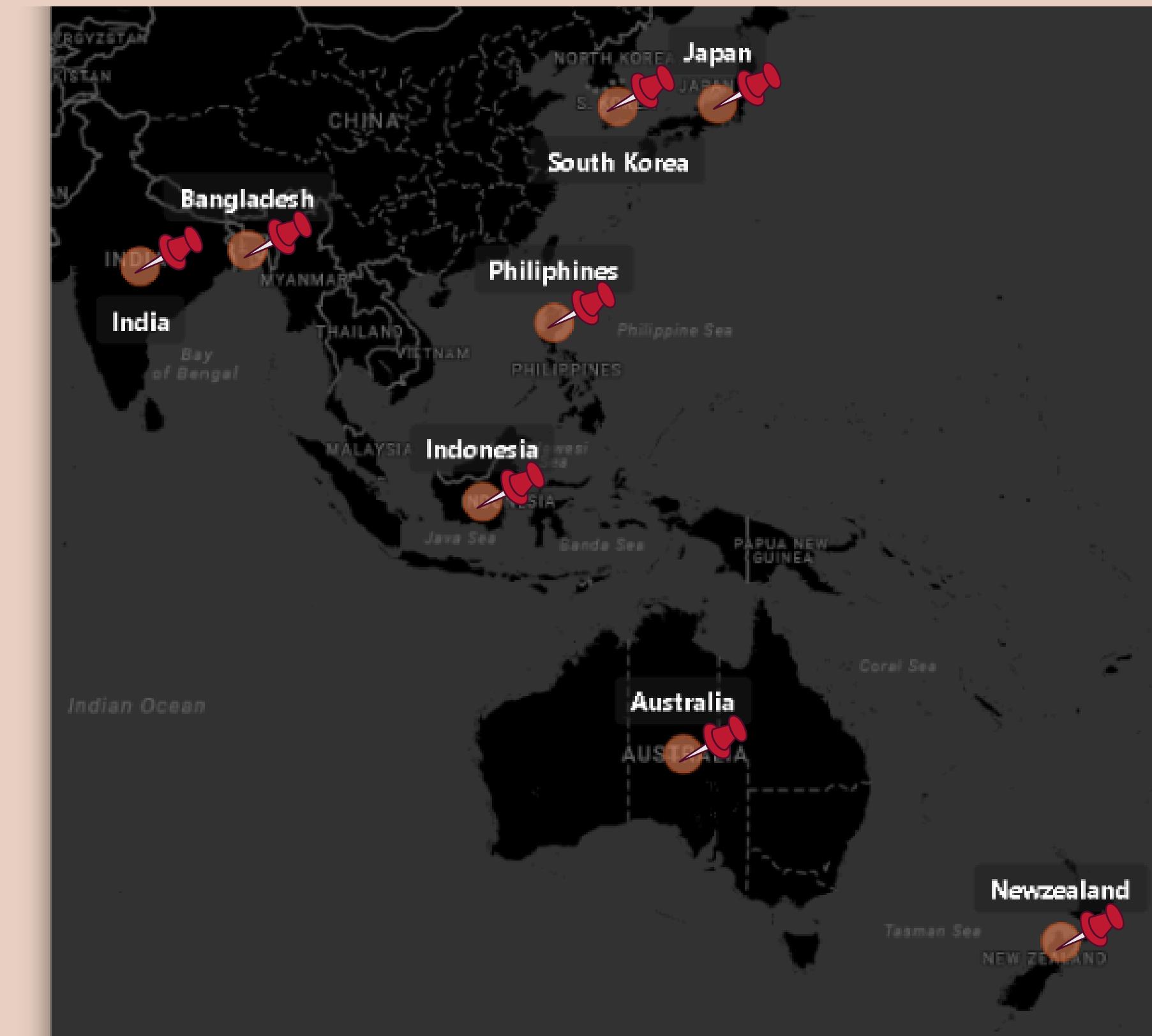
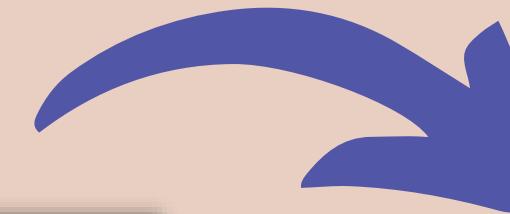
Indonesia

Japan

Newzealand

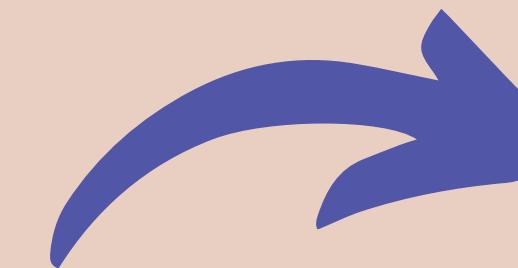
Philippines

South Korea

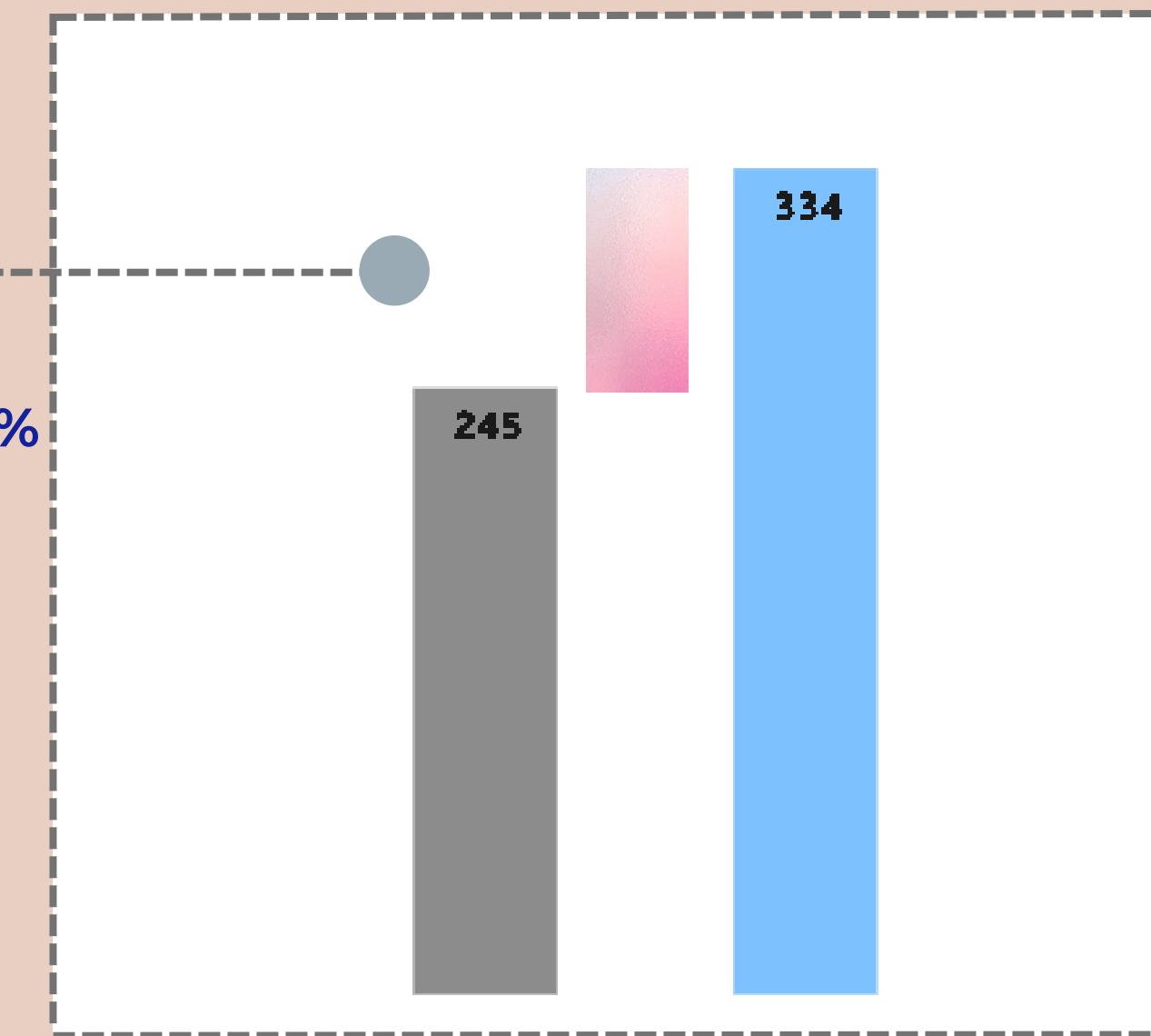


2.What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,  
unique\_products\_2020  
unique\_products\_2021  
percentage\_chg

unique_products_2020	unique_products_2021	percentage
245	334	36.33



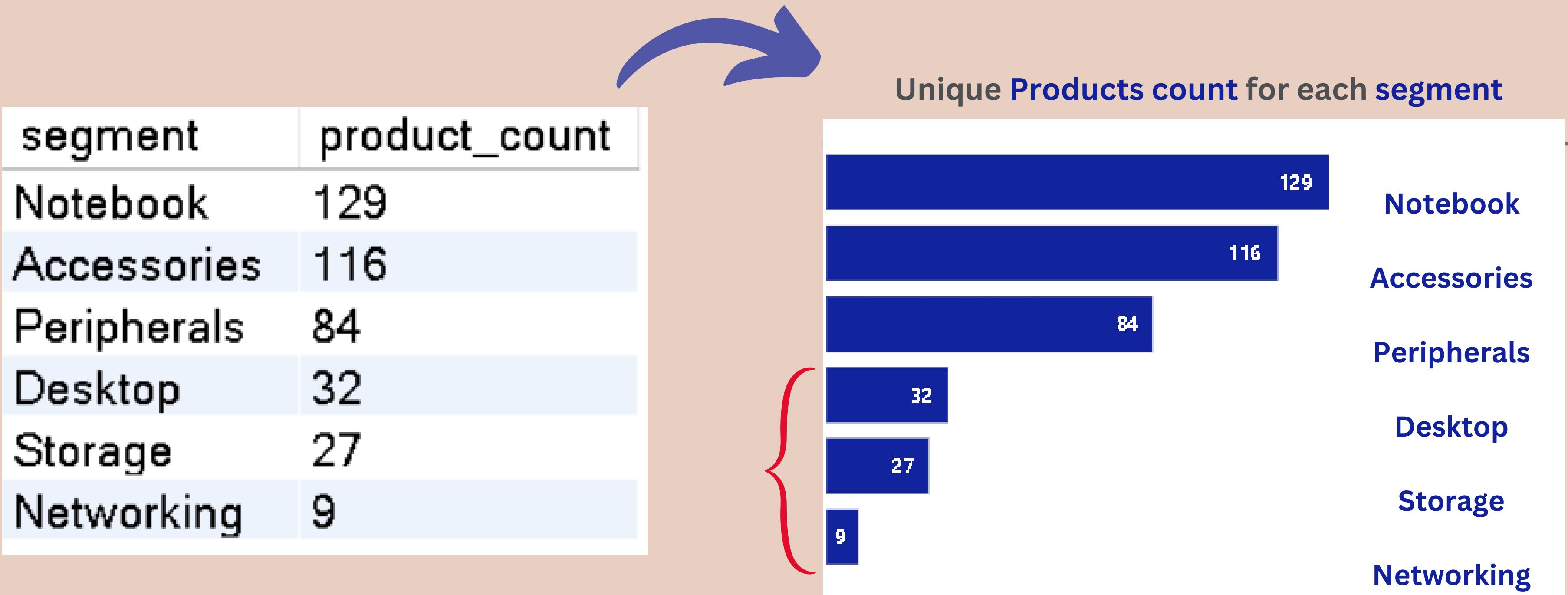
Percentage  
Change **36.33%**



**Insight:**

Demand & Production both have **increased**

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 and product\_count .



- Notebook leads with 129 products, followed by Accessories with 116 & Peripherals with 84 as compared to Desktop, Storage and Networking.
- These three segments alone account for 83% of the total products .
- Desktop, Storage, and Networking have relatively fewer products compared to other segments. This suggests they may have lower priority, demand, or limited offerings in the current product lineup.

## RECOMMENDATIONS

Segment	Avg_MC	Avg_GS	Gross Margin
Peripherals	\$560.00	\$1,876.74	61.00%
Accessories	\$612.42	\$2,047.09	60.89%
Notebook	\$695.49	\$2,323.83	60.88%
Desktop	\$878.35	\$2,919.91	60.65%
Storage	\$909.70	\$3,034.80	60.82%
Networking	\$1,518.57	\$5,105.63	61.12%

Avg\_MC - Average Manufacturing Cost

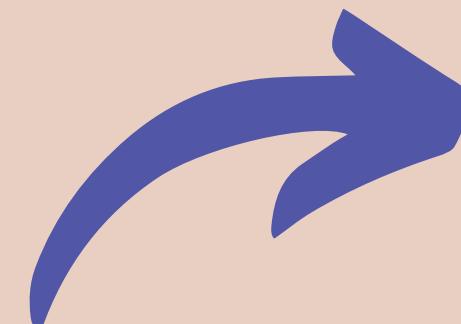
Avg\_GS - Average Gross Margin



- Diversify – Add products like gaming desktops or mini PCs to the Desktop segment.
- Expand – Introduce more SSD and external drive options in the Storage category.
- Balance – Adjust inventory to ensure all segments, including Networking, are well-stocked.
- Evaluate – Study **customer interest** and **sales trends** in low-product segments.
- Optimize – Streamline product selection in low-stock segments (like Networking or Storage) by focusing on what **customers actually want** – remove less popular items and add more of the ones that sell well.

4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segments

product\_count\_2020  
product\_count\_2021  
& difference.



Unique Product difference by Segment from 2020 to 2021

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

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	↑

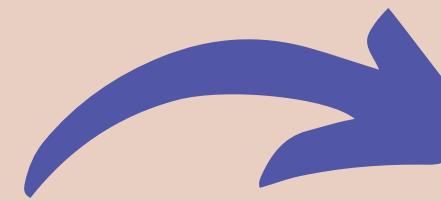
## Insights:

- Overall Growth: Every product segment has increased its product count from 2020 to 2021.
- Top Gainer: Accessories had the highest increase, with 34 more products in 2021 than in 2020.
- Equal Growth: Notebook and Peripherals both increased by 16 products.
- Big Jump in Desktop: Desktop grew from 7 to 22 products – that's more than 3 times the previous year.
- Smallest Growth: Networking only increased by 3 products less than other Segment
- Positive Trend: All arrows are pointing up, which shows a positive trend in product counts across all segments.

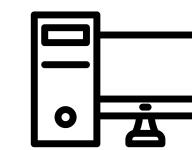
5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, `product_code` & `product manufacturing_cost`.

Products having the  
**Highest & Lowest**  
Manufacturing cost

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



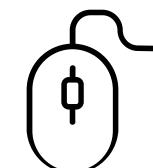
\$ 240.54



A6120110206  
AQ HOME Allin1 Gen 2

Personal Desktop

\$ 0.89



A2118150101  
AQ Master wired x1 Ms

Mouse

## Insights:

Product Code & Product

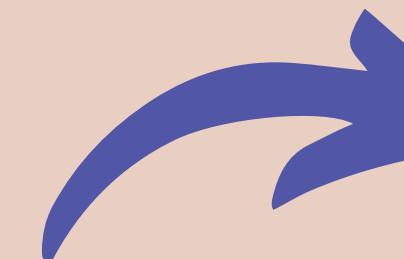
- Personal Desktop : AQ HOME Allin1 Gen 2 (**Variant : Standard 1**) has the highest manufacturing cost.
- Mouse : AQ Master wired x1 Ms (**Variant : Plus 3**) has the lowest manufacturing cost.

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,

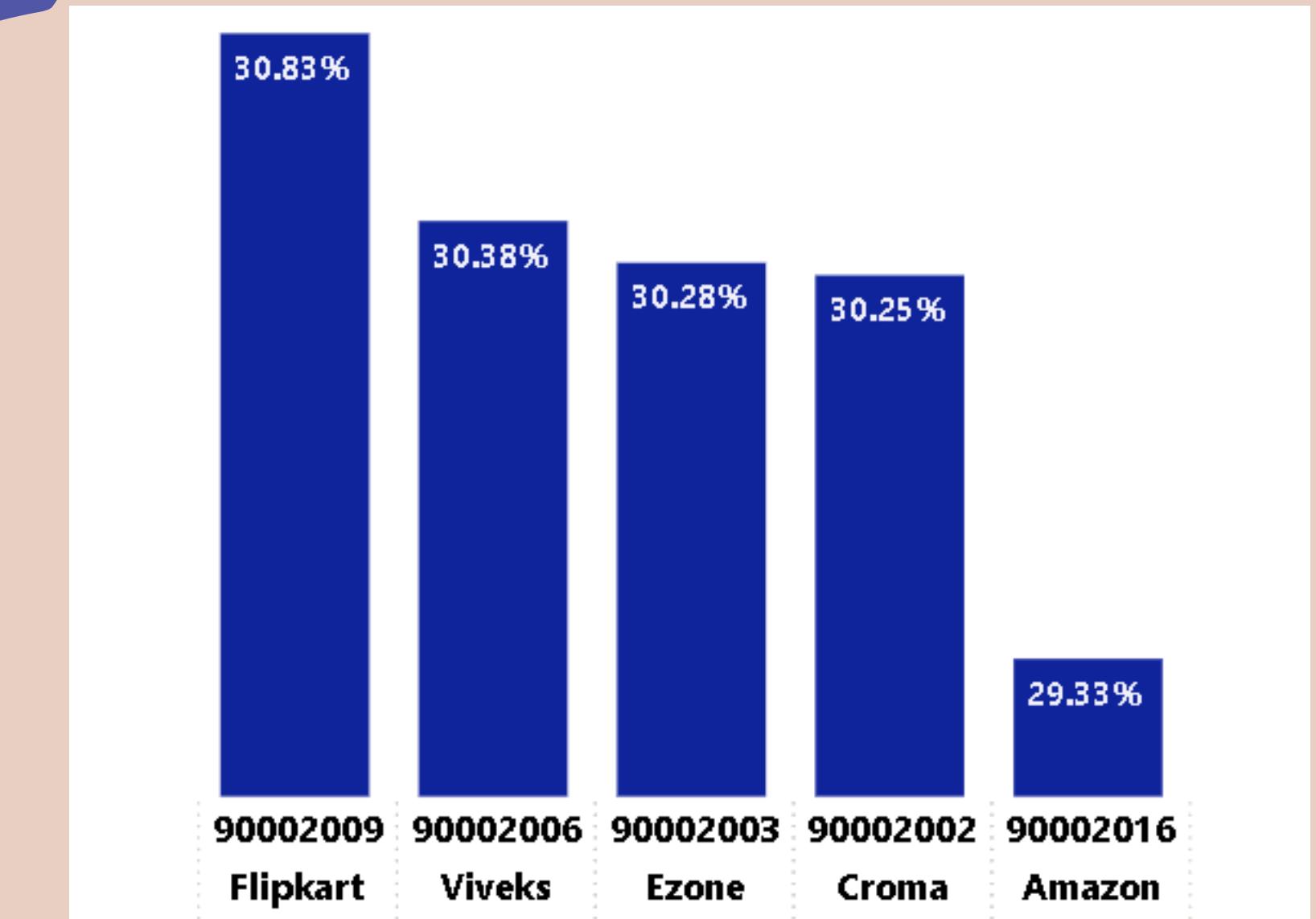
customer\_code

customer

average\_discount\_percentage



customer_code	customer	avg_discount_percentage
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933



## Insights:

Customer Code & Customer

- The highest average pre\_invoice discount was given to **Flipkart (30.83%)**
- The lowest average pre\_invoice discount was given to **Amazon(29.33%)**

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

## Insights:

- The **Lowest Gross sales total for FY 2020 is in March (2020) & in August (2021)** for FY 2021.
- The **Highest Gross Sales Total for both FY (2020 & 2021) is in November.**  
*(This aligns with festive season sales Diwali period in India.)*
- October to December** in both years saw strong and consistent growth, likely due to holiday shopping and promotions.
- Sales dropped in March & April 2020, likely due to **COVID-19** lockdowns – from ₹9M in Jan/Feb to ₹0.7 M in April.

Month	fiscal_year	Gross_Sales_Amount
September (2019)	2020	9092670.34
October (2019)	2020	10378637.60
November (2019)	2020	15231894.97
December (2019)	2020	9755795.06
January (2020)	2020	9584951.94
February (2020)	2020	8083995.55
March (2020)	2020	766976.45
April (2020)	2020	800071.95
May (2020)	2020	1586964.48
June (2020)	2020	3429736.57
July (2020)	2020	5151815.40
August (2020)	2020	5638281.83
September (2020)	2021	19530271.30
October (2020)	2021	21016218.21
November (2020)	2021	32247289.79
December (2020)	2021	20409063.18
January (2021)	2021	19570701.71
February (2021)	2021	15986603.89
March (2021)	2021	19149624.92
April (2021)	2021	11483530.30
May (2021)	2021	19204309.41
June (2021)	2021	15457579.66
July (2021)	2021	19044968.82
August (2021)	2021	11324548.34

**Total Gross Sales**

**FY 2020**

**79.5 M**

**FY 2021**

**224.4 M**

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 .

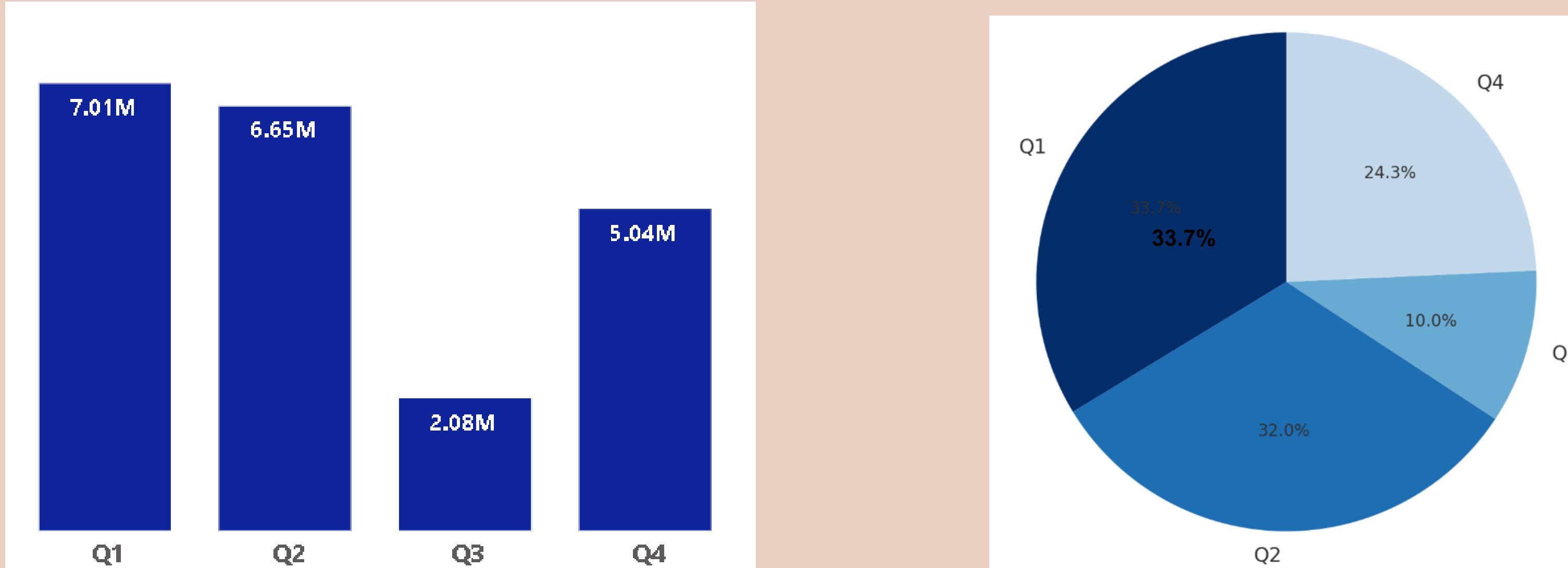
Quarters	total_sold_quantity
Q1	7005619
Q2	6649642
Q3	2075087
Q4	5042541

## Insights:

- Q1 leads with the highest total sold quantity: 7,005,619 units, indicating a strong performance.
- Q3 has the lowest sales: 2,075,087 units, which is ~70% lower than Q1.
- From Q2 (6.6M) to Q3 (2.0M), sales dropped by ~69%, which is the steepest decline quarter-over-quarter. This deserves investigation.
- Q4 sales (5,042,541 units) increased ~143% compared to Q3, indicating demand picks up again towards year-end

Month	Sold_quantity
September	1764002
October	2190792
November	3050825
December	3184205
January	1762652
February	1702785
March	238961
April	819956
May	1016170
June	1559773
July	1692575
August	1790193

# Total Sold Quantity & Contribution per In FY 2020

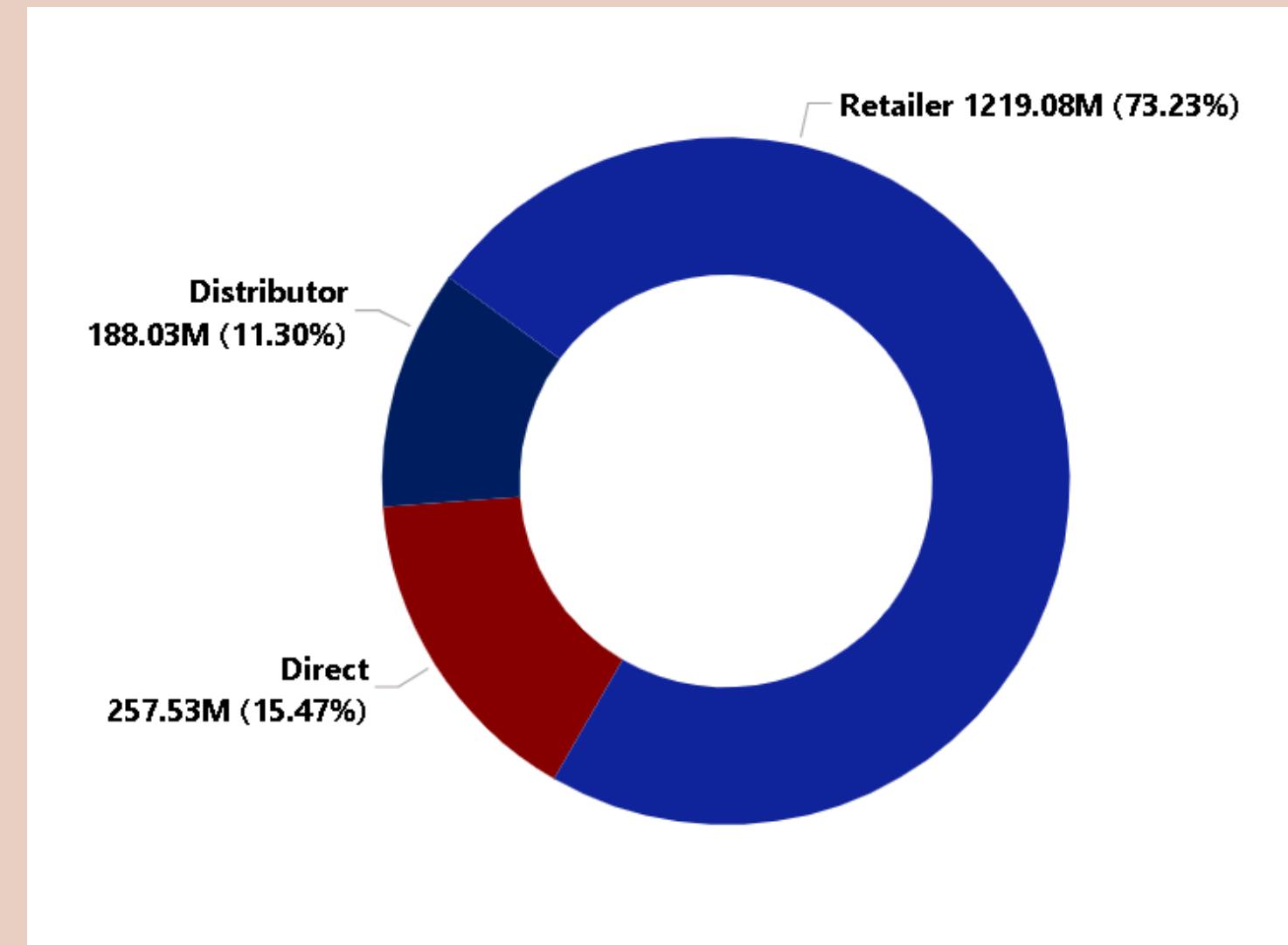


## 📌 Suggestions:

- Investigate why Q3 dropped significantly (e.g., external factors, inventory issues, market conditions).  
**Reason - COVID - 19**
- Consider leveraging Q1 and Q4 seasonal trends in future strategies.
- Smoothen sales through better forecasting and promotions in low quarters.

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_mln	contribution_per
Retailer	1219.08 M	73.23 %
Direct	257.53 M	15.47 %
Distributor	188.03 M	11.30 %



## Insights :

- **Retailer** channel dominates the sales with over **73%** of total gross sales, contributing more than **3 times** the sales of the Direct and Distributor channels combined.
- **Distributor** channel contributes the **least** with **11%**, suggesting lower dependence or performance in that segment.  
*(This low number may mean fewer distributor partners or less reach in the market)*

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,

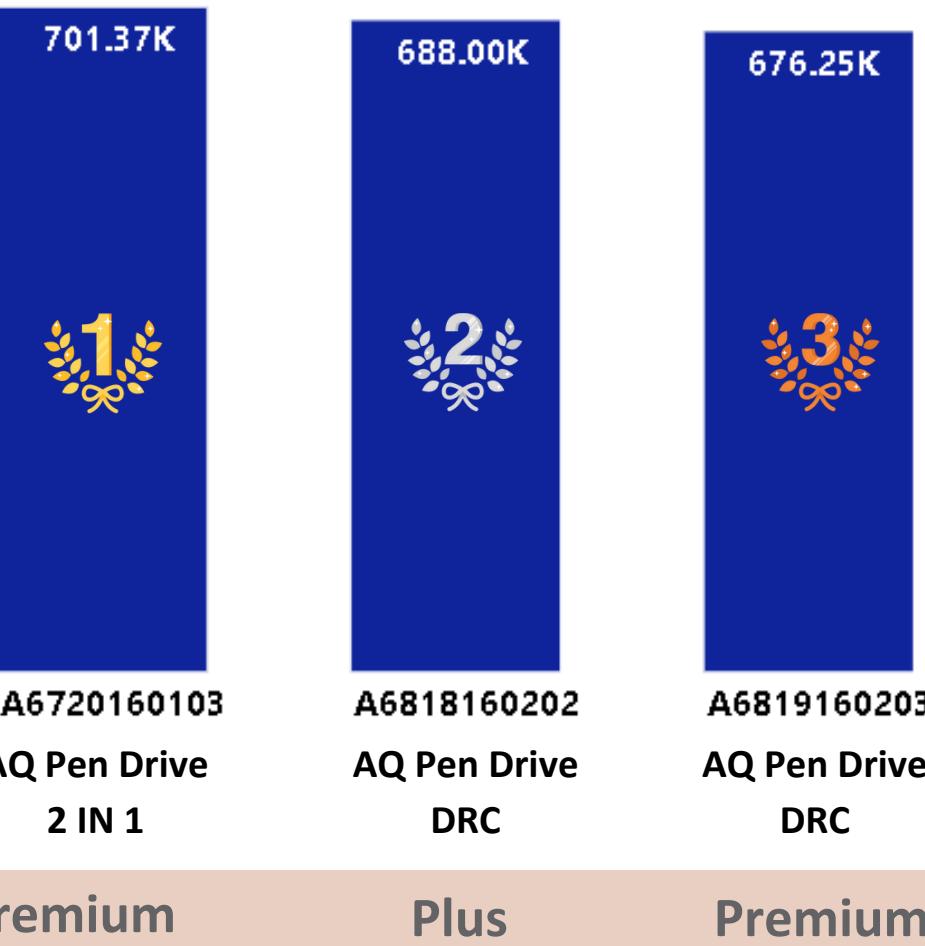
product ,total\_sold\_quantity & rank\_order

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

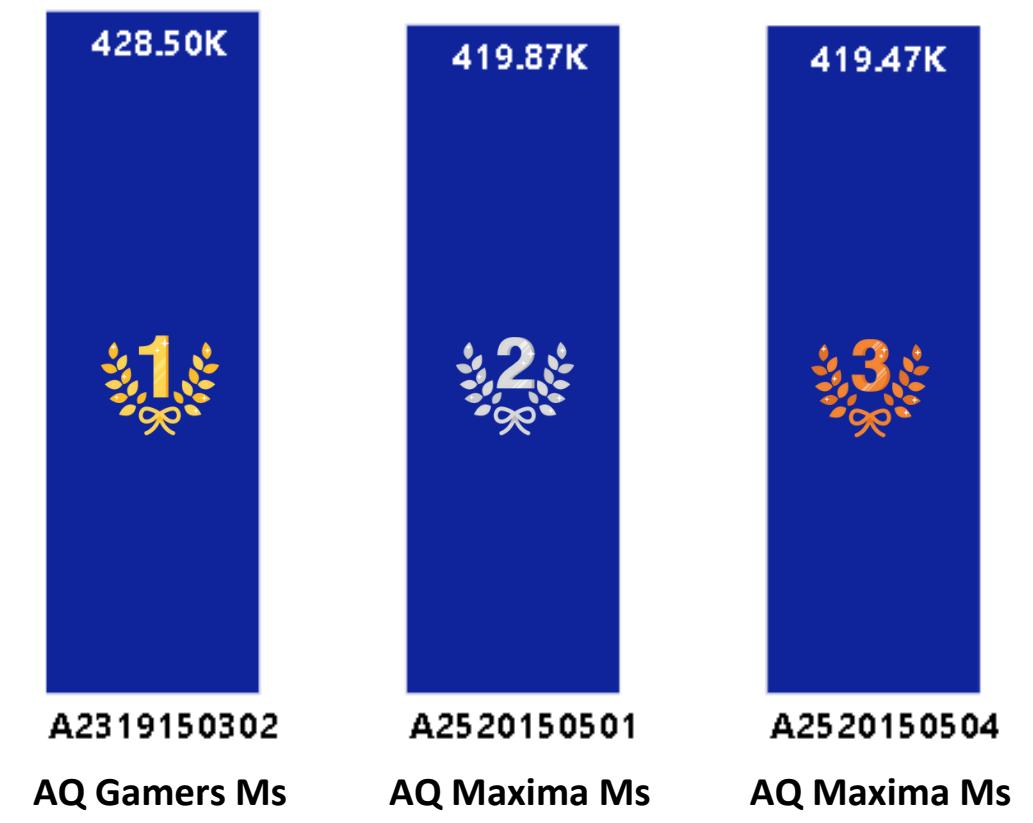
## Insights :

- In N & S division, All three top products are different variants of AQ Pen Drive – strong dominance of pen drives in this division.
- In P & A division, Consistent sales (~1.26M units) across gaming and maxima models – opportunity to expand product line and boost competitive edge.
- In PC division, very low sales (~52K units) – signals poor product-market fit; requires urgent review of strategy, pricing, or marketing.

**Division • N & S**

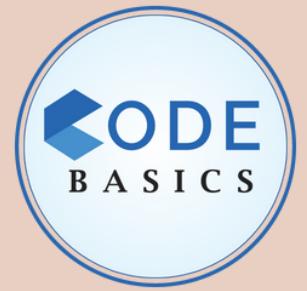


**Division • P & A**



**Division • PC**





Thank You  
FOR WATCHING THIS PRESENTATION

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