



# Ad\_Hoc Insights Consumer Goods

PRESENTED BY ANIRUDDHA BISWAS



# OBJECTIVES

**Company Overview:** Atliq Hardware is a leading computer hardware manufacturer in India with a strong international presence. Despite its success, the company faces a challenge: the lack of timely, data-driven insights to make strategic decisions.

## **Strategic Initiative:**

- **Expansion of Data Team:** Atliq plans to enhance its operational capabilities by expanding its data analytics team with skilled junior data analysts.
- **Objective:** Equip the company with the necessary tools to respond swiftly and efficiently to market changes and internal demands.

## **Talent Acquisition Approach:**

- **SQL Challenge:** Devised by Tony Sharma, the Data Analytics Director, this challenge is designed to evaluate candidates on both technical skills and soft skills.
- **Goal:** Ensure new hires can contribute significantly to Atliq's data-driven decision-making process, enhancing overall business agility.

# REQUESTS



## 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,

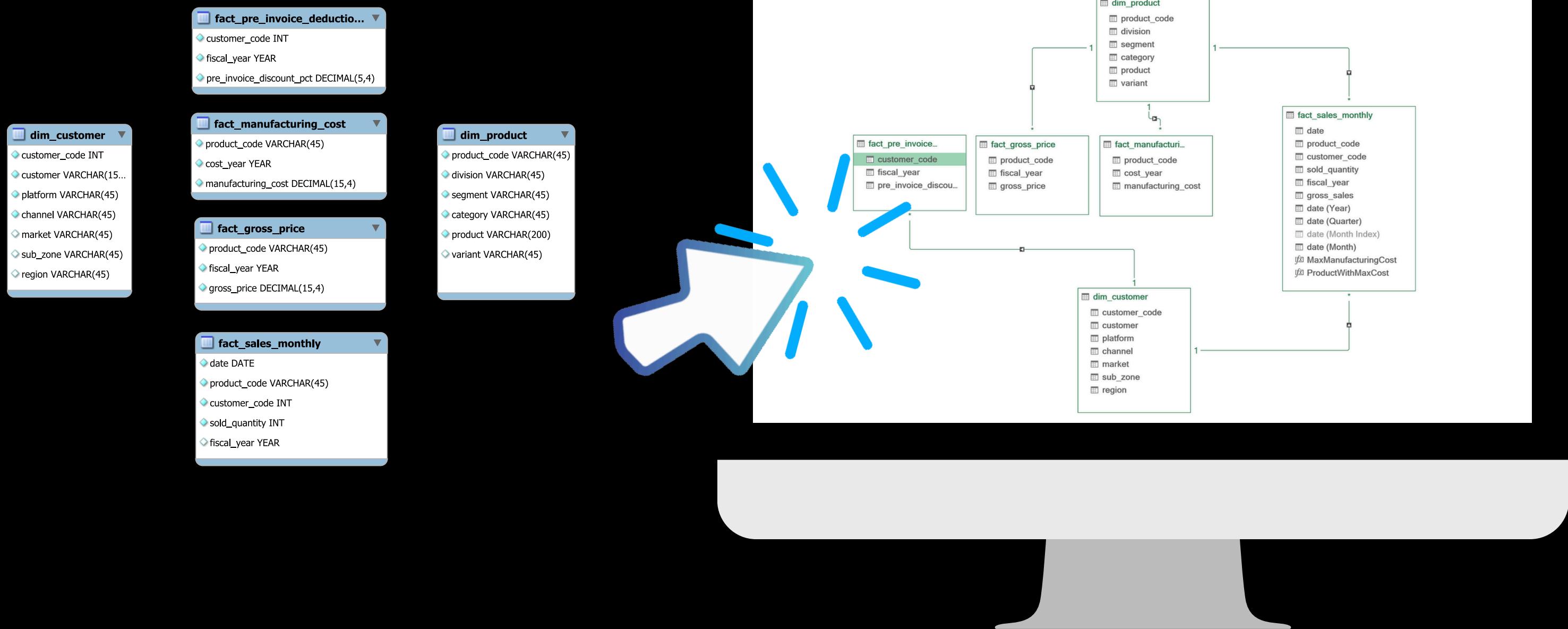
channel  
gross\_sales\_mln  
percentage

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  
product  
total\_sold\_quantity  
rank\_order

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# DATA MODEL



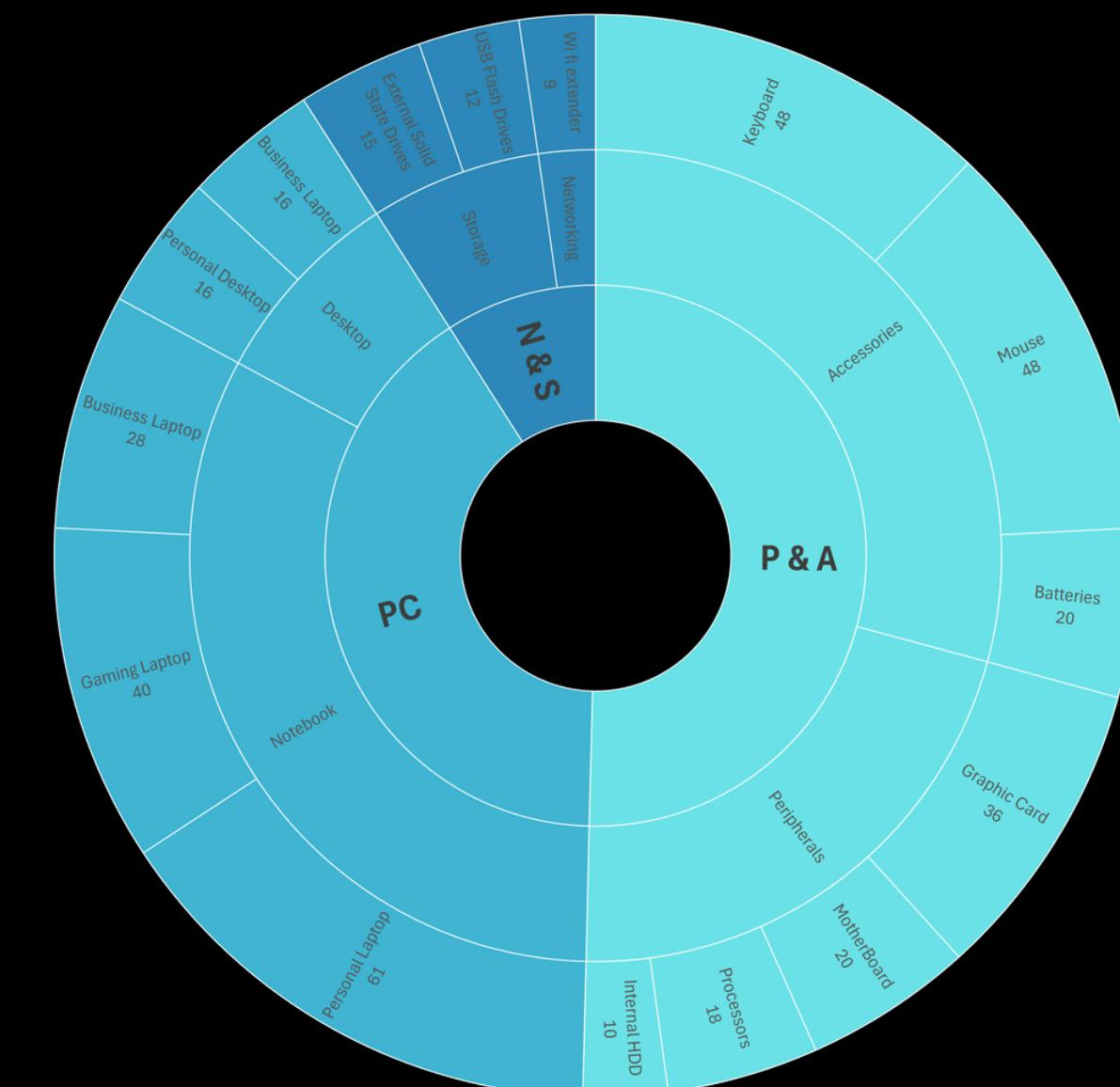
# ABOUT COMPANY



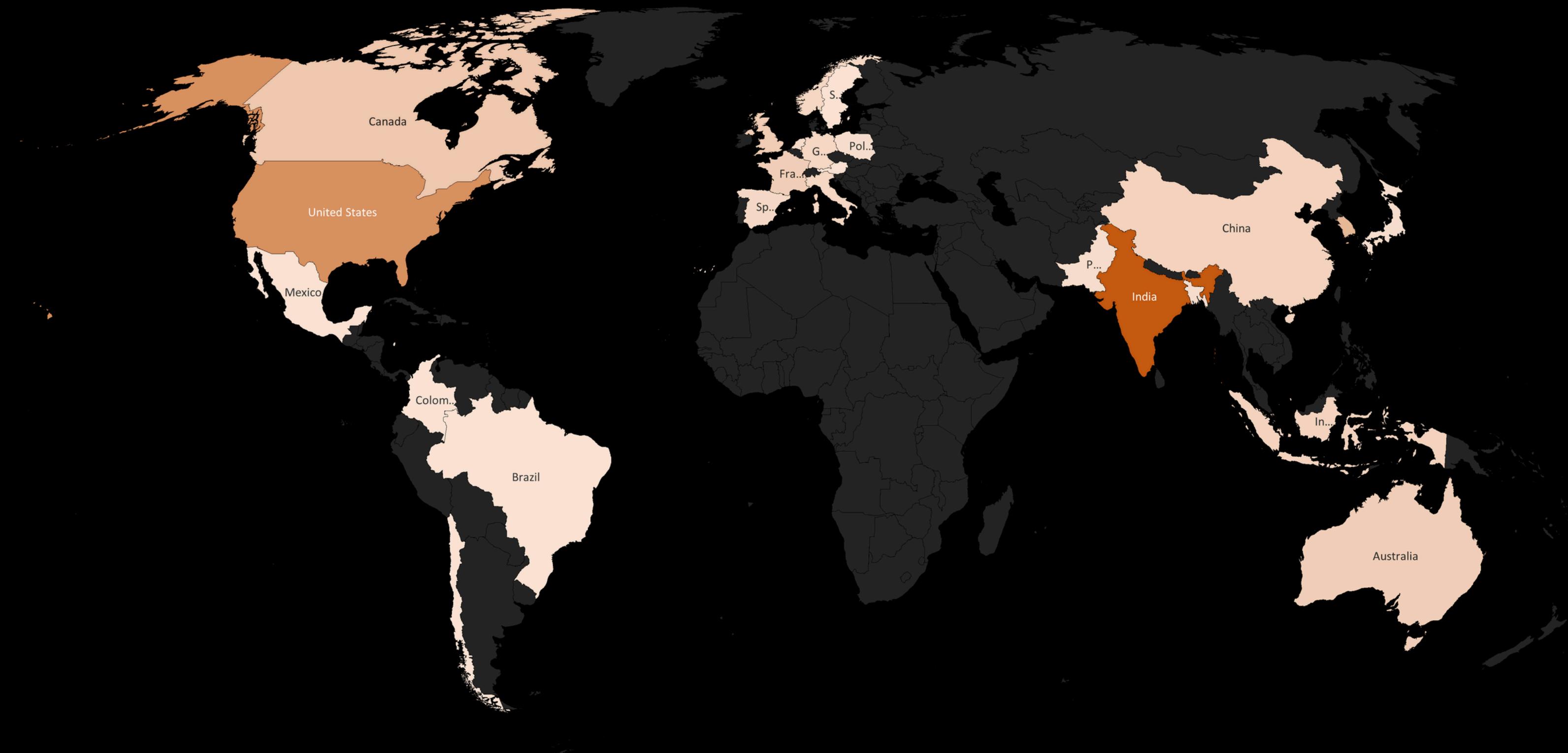
COMPANY'S  
FYSCAL YEAR



## COMPANY'S PRODUCT DISTRIBUTION CHART



# COMPANY MARKET



# **COMPANY MARKET**

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## **EU - Region**

- France
- Germany
- Italy
- Netherlands
- Norway
- Poland
- Spain
- Portugal
- Sweden
- Austria
- United Kingdom

## **APAC - Region**

- India
- Indonesia
- Japan
- Pakistan
- Philiphines
- South Korea
- Australia
- New Zealand
- Bangladesh

## **APAC - Region**

- Mexico
- Chile
- Brazil
- Columbia

## **NA - Region**

- USA
- Canada

#EU- European Union; #APAC - Asia Pacific Accreditation Cooperation; #LATAM-Latin America; #NA- North America

**Q1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.**

market	customer	region
India	Atliq Exclusive	APAC
Indonesia	Atliq Exclusive	APAC
Japan	Atliq Exclusive	APAC
Philippines	Atliq Exclusive	APAC
South Korea	Atliq Exclusive	APAC
Australia	Atliq Exclusive	APAC
Newzealand	Atliq Exclusive	APAC
Bangladesh	Atliq Exclusive	APAC

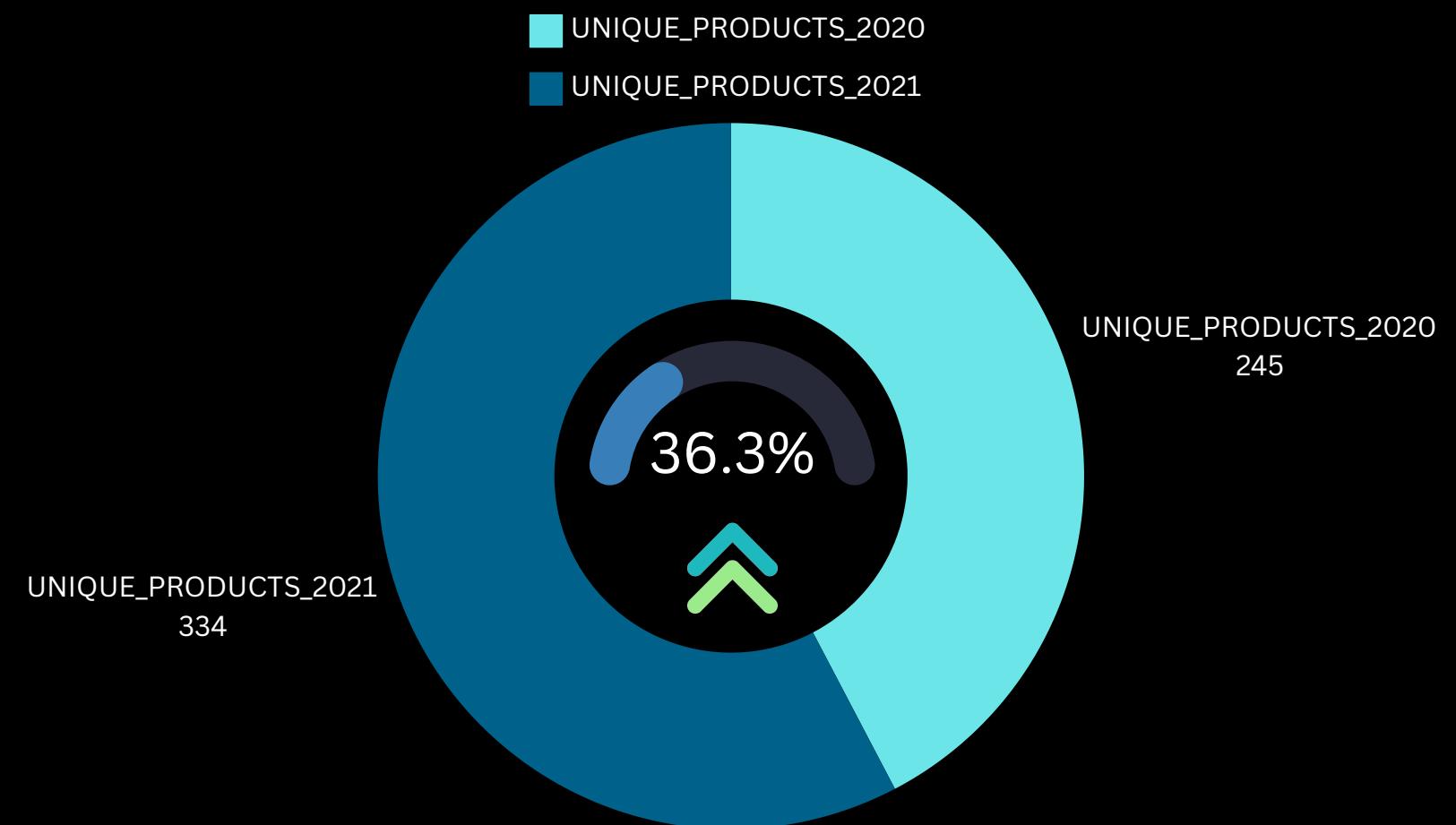


**Q2. What is the percentage of unique product increase in 2021 vs. 2020?**

The final output contains these fields,

- **unique\_products\_2020**
- **unique\_products\_2021**
- **percentage\_chg**

UNIQUE_PRODUCTS_2020	UNIQUE_PRODUCTS_2021	CHANGE_PERCENTAGE
245	334	36.33

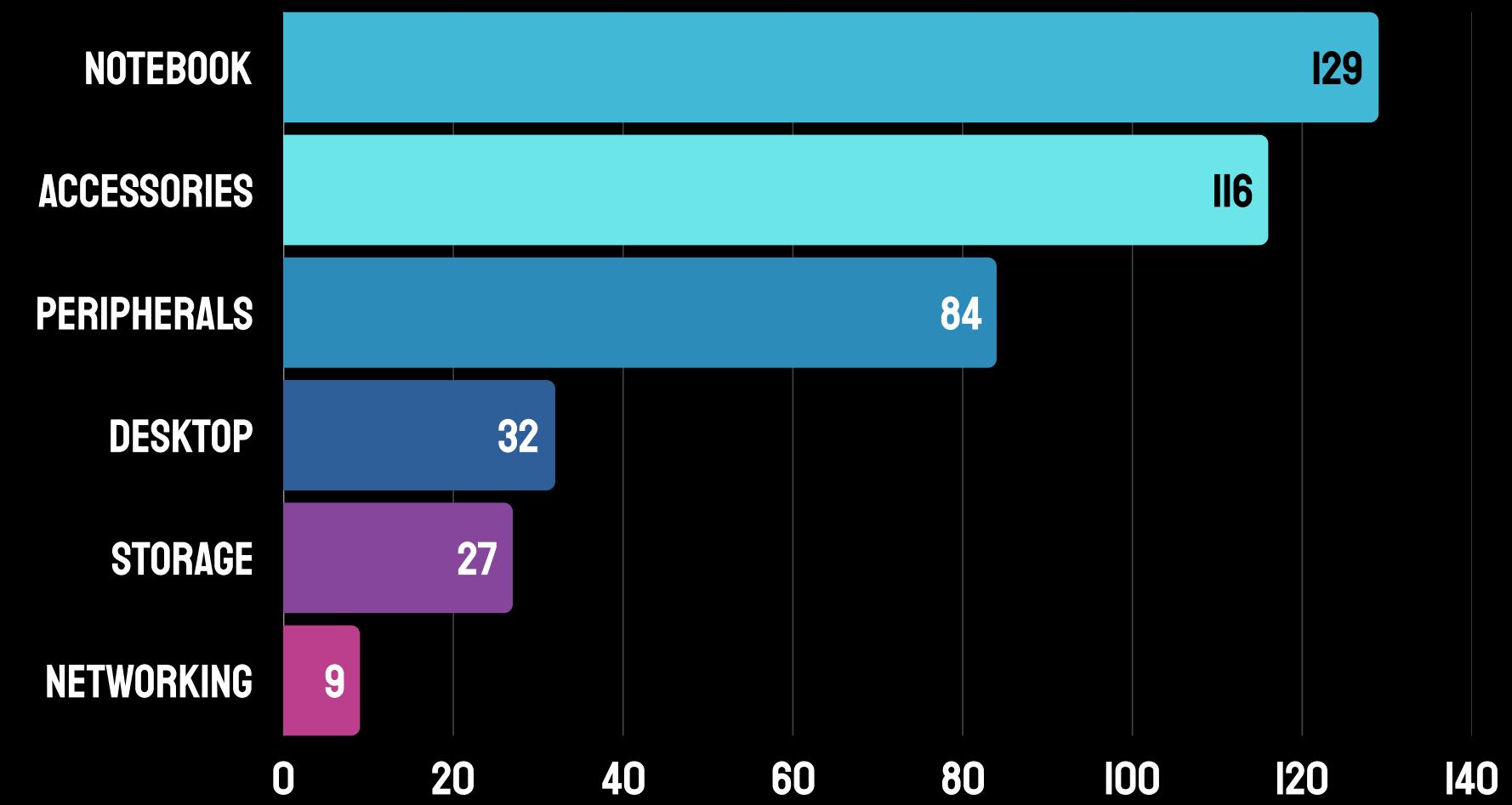


**Q3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.**

The final output contains 2 fields:

- **segment**
- **product\_count**

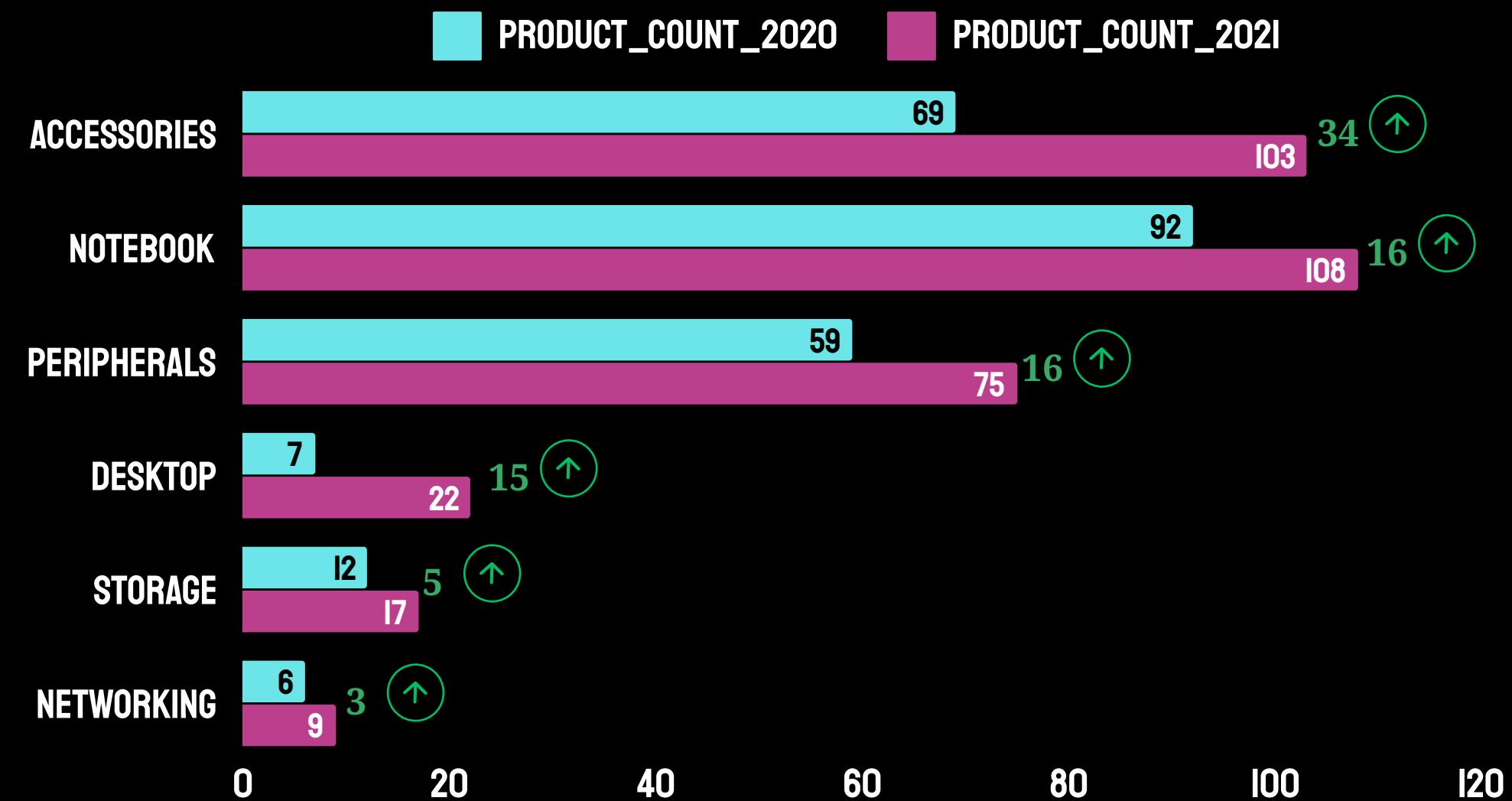
segment	Product_Count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9



**Q4. 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	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



**Q5. Get the products that have the highest and lowest manufacturing costs.  
The final output should contain these fields:**

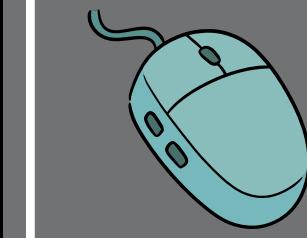
- **product\_code**
- **product**
- **manufacturing\_cost**

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



**Product Having Highest Manufacturing Cost**  
**\$240.54**  
AQ HOME Allin1 Gen 2  
Personal Desktop

**Product Code**  
**A6120110206**



**Product Having Lowest Manufacturing Cost**  
**\$0.89**  
AQ Master wired x1 Ms  
Mouse

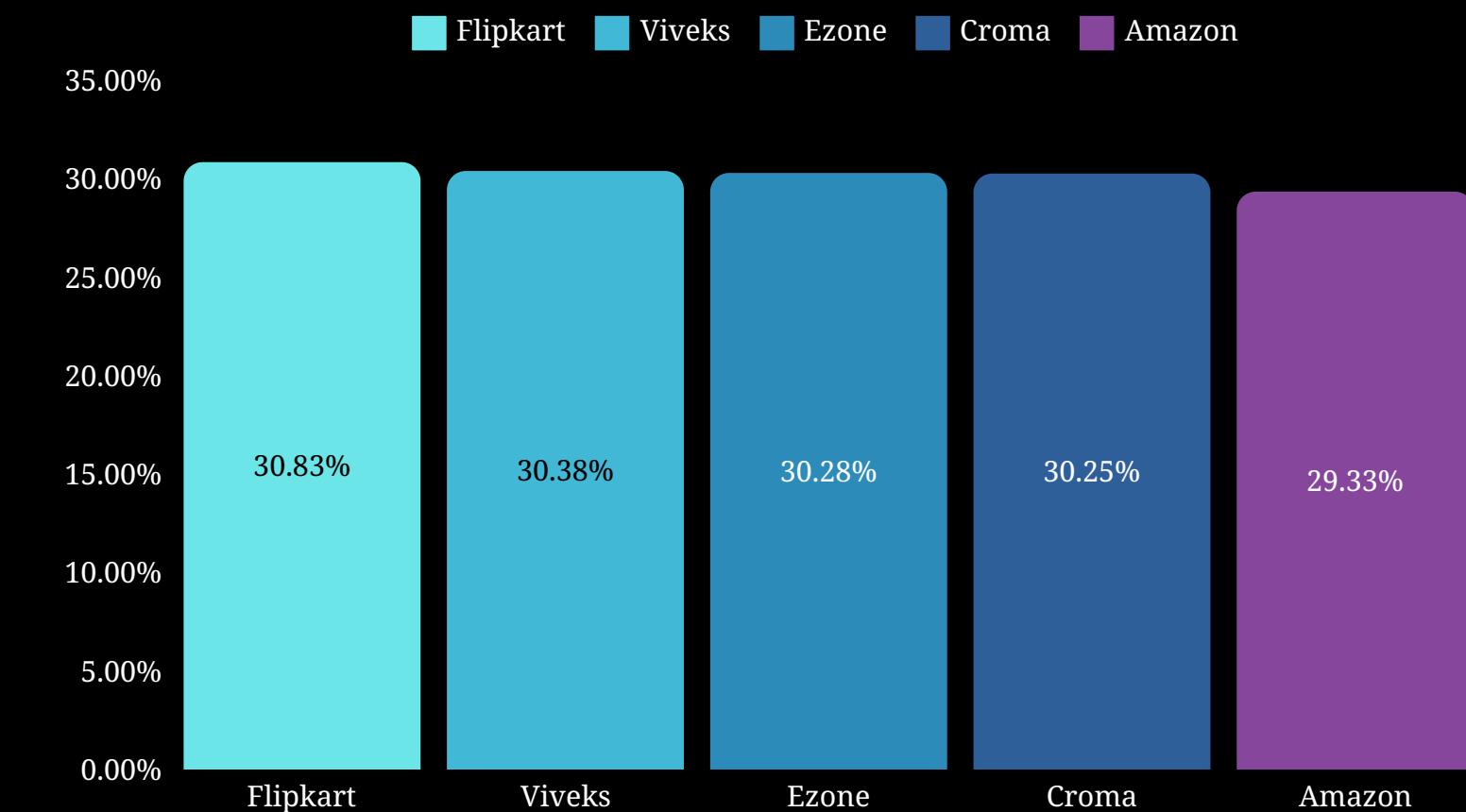
**Product Code**  
**A2118150101**

**Q6. 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,**

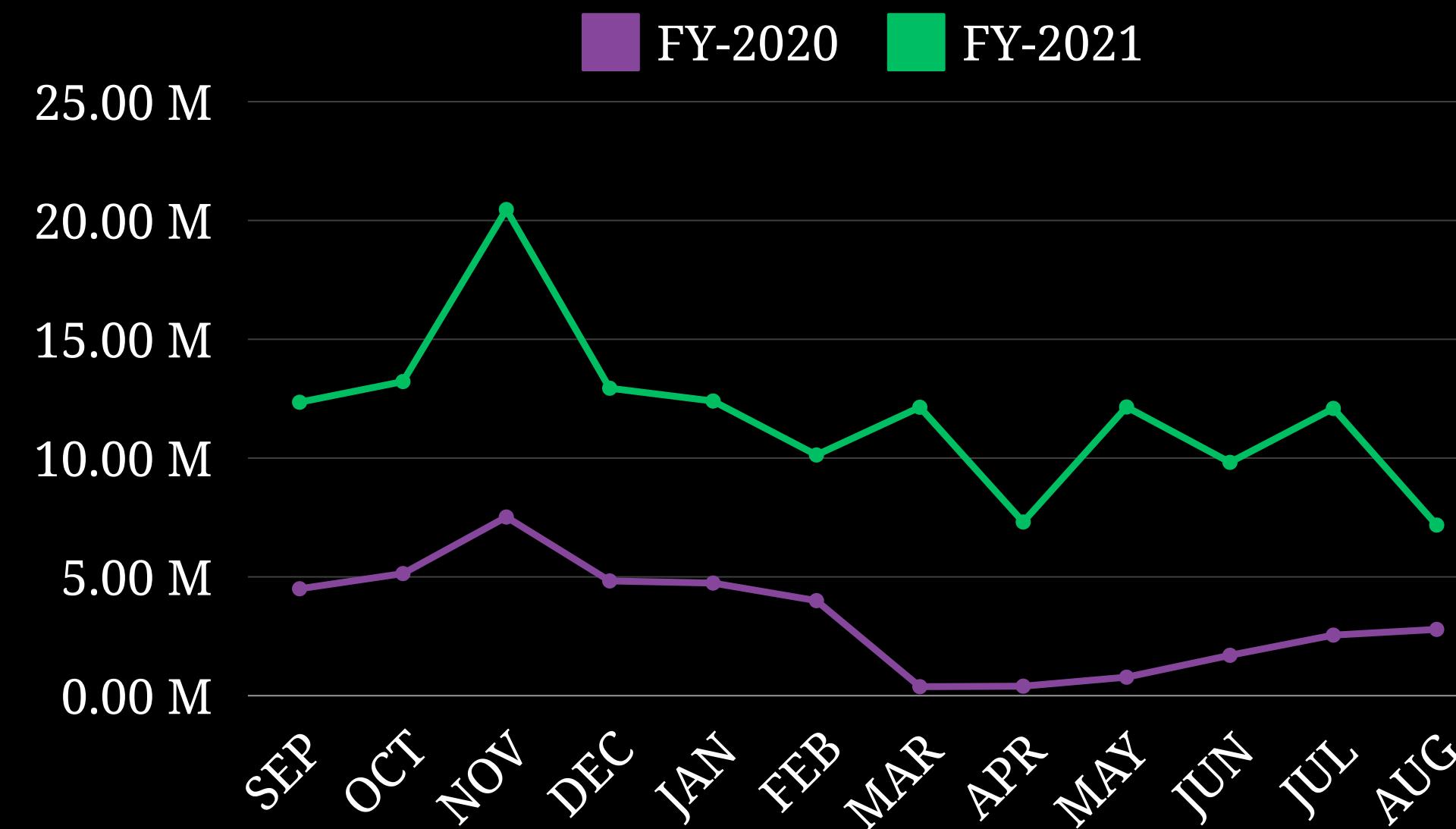
- **customer\_code**
- **customer**
- **average\_discount\_percentage**

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



**Q7. 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.**

MonthYear	fiscal_year	Gross_sales_Amount
September (2019)	2020	4496259.67
October (2019)	2020	5135902.35
November (2019)	2020	7522892.56
December (2019)	2020	4830404.73
January (2020)	2020	4740600.16
February (2020)	2020	3996227.77
March (2020)	2020	378770.97
April (2020)	2020	395035.35
May (2020)	2020	783813.42
June (2020)	2020	1695216.60
July (2020)	2020	2551159.16
August (2020)	2020	2786648.26
September (2020)	2021	12353509.79
October (2020)	2021	13218636.20
November (2020)	2021	20464999.10
December (2020)	2021	12944659.65
January (2021)	2021	12399392.98
February (2021)	2021	10129735.57
March (2021)	2021	12144061.25
April (2021)	2021	7311999.95
May (2021)	2021	12150225.01
June (2021)	2021	9824521.01
July (2021)	2021	12092346.32
August (2021)	2021	7178707.59

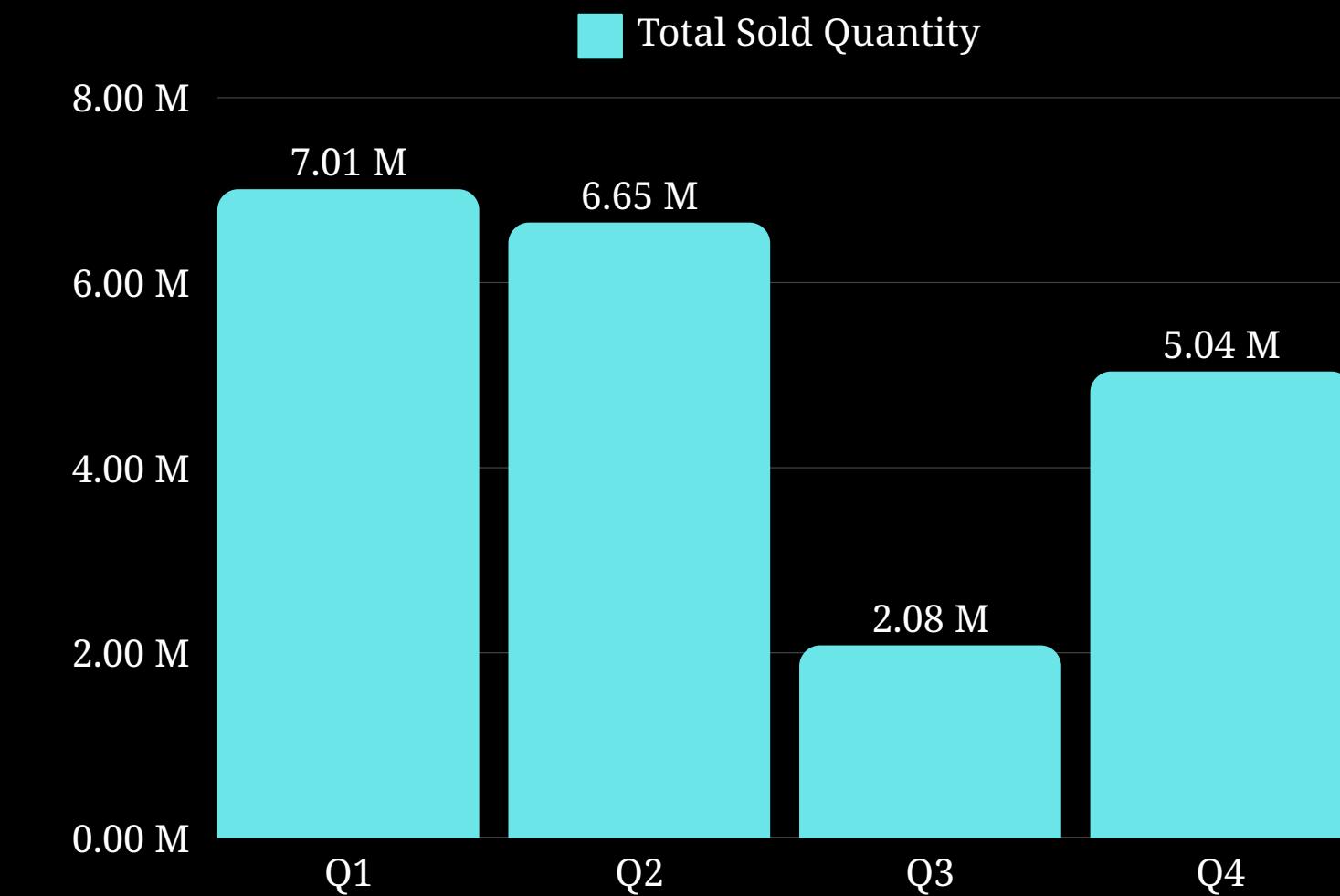


**Q8. In which quarter of 2020, got the maximum Total Sold quantity?**

The final output contains these fields sorted by:

- Quarter
- total\_sold\_quantity

Quarters	total_sold_quantity
1	7005619
2	6649642
4	5042541
3	2075087



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_million	percentage_contribution
Retailer	1,219.08M	73.23%
Direct	257.53M	15.47%
Distributor	188.03M	11.30%

Legend:  
Retailer (cyan)  
Direct (purple)  
Distributor (blue)

Distributor  
11.3%

Direct  
15.5%

Retailer  
73.2%

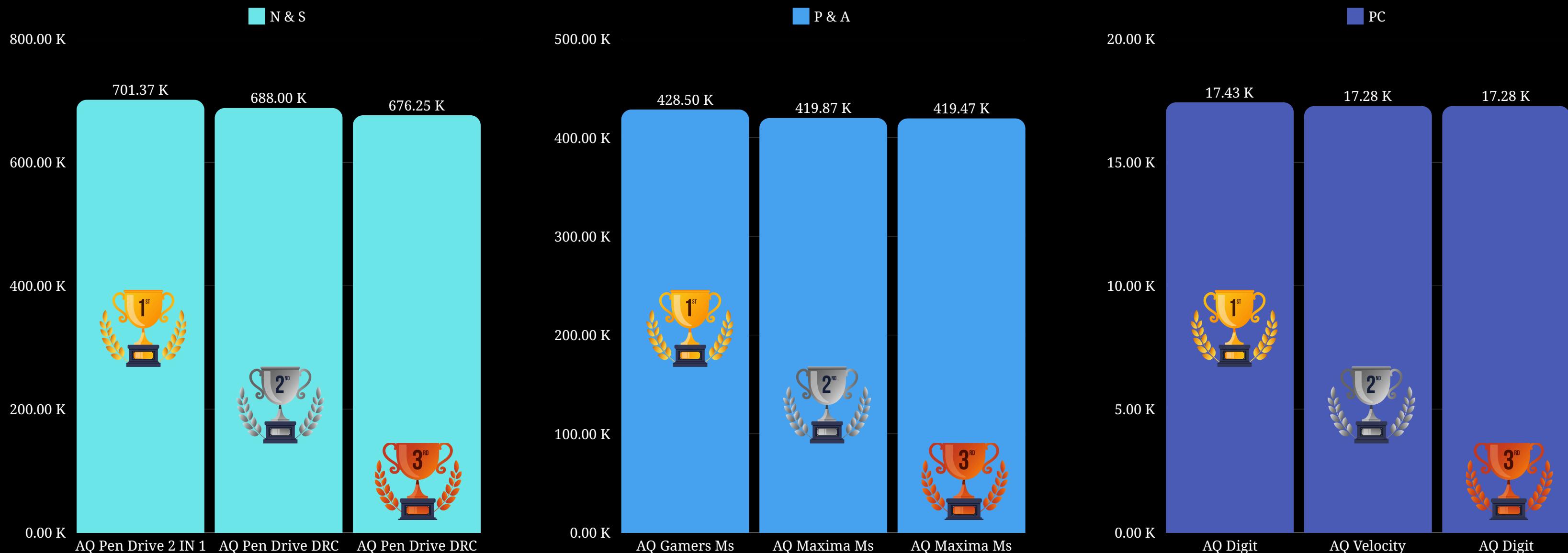
10. Get the Top 3 products in each division that have a high total\_sold\_quantity in the fiscal\_year 2021?

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	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

# DIVISION WISE TOP 3 PRODUCTS



# INSIGHTS

## **MARKET EXPANSION**

- Strong presence in APAC & EU but relatively lower in North America (NA) and Latin America (LATAM).
- India, Indonesia, and Japan are key APAC markets.
- Germany, France, and UK lead in EU.
- Mexico, Brazil, and USA show growth potential in LATAM & NA.

## **PRODUCT PERFORMANCE**

- Notebook & Accessories dominate product sales, showing high demand in computing and peripherals.
- Gaming accessories & storage products are rising in demand.

## **SALES & DEMAND TRENDS**

- Q1 of 2020 had the highest total sold quantity (7.01M units).
- Q3 of 2020 had the lowest sales (2.08M units).
- Retail contributed 73.2% of total gross sales, showing dependence on distributors.

## **MANUFACTURING COSTS & PROFITABILITY**

- Highest cost product: AQ HOME Allin1 Gen 2 (\$240.54).
- Lowest cost product: AQ Master wired x1 Ms (\$0.89).
- Cost variation indicates potential pricing optimization opportunities.

# TOOLS USED

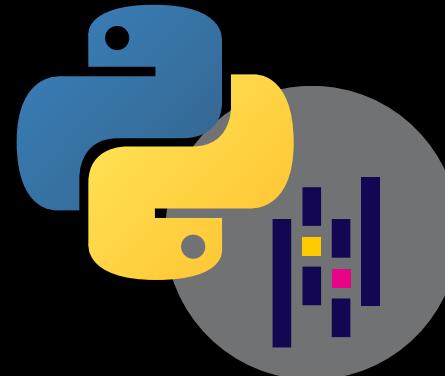
**FOR DATA “MY SQL”**



**FOR VISUALIZATION “MICROSOFT EXCEL & CANVA”**



**FOR DATA RECHECK “PYTHON”**





*My heartfelt gratitude to Hemanand Vadivel sir and Dhaval Patel sir. Your teachings have been truly transformative, and I deeply appreciate everything I have learned from you!*

*A big thank you to Team CodeBasics and Atliq Technologies for providing this amazing opportunity.*





# THANK YOU!

I APPRECIATE YOUR TIME AND ATTENTION!  
FEEL FREE TO CONNECT FOR ANY QUESTIONS OR DISCUSSIONS.

