# AtliQ Hardware:

CONSUMER GOODS
AD – HOC INSIGHTS

Presented By - Akash Singh

LET ME TALK WITH THE DATA AND
GET INSIGHTS FOR YOU

Data Enthusiast Guy

Let's Connect ✉ heyiamakash19@gmail.com

Akash Singh (He/Him)
Aspiring Power Bi developer | Data Analyst 📊 | Data Visualization | Dax | MySQL | SQL Server | Advance Excel | Python

Durgapur, West Bengal, India · Contact info

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Objective

Atliq Hardware (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too. specializes in selling computers and accessories across regions spanning APAC, LATAM, NA, and EU.

Problem Statement

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

- However, Tony Sharma (Data Analytics Director) wants to expand their data analytics team by adding several junior data analysts. So he decided to conduct a SQL challenge which will help him understand both tech and soft skills

- Now the company wants insights for 10 ad hoc / business requests.

AtliQ's Product Divisions

PC
- Desktop
  - Business Laptop
  - Personal Desktop
- Notebook
  - Gaming Laptop
  - Personal Laptop
  - Business Laptop

P&A
- Peripherals
  - Graphics Card
  - Internal HDD
  - Mother Board
  - Processors
- Accessories
  - Batteries
  - Keyboard
  - Mouse

N&S
- Networking
  - Wi Fi Extender
- Storage
  - External SSD
  - USB Flash Drives
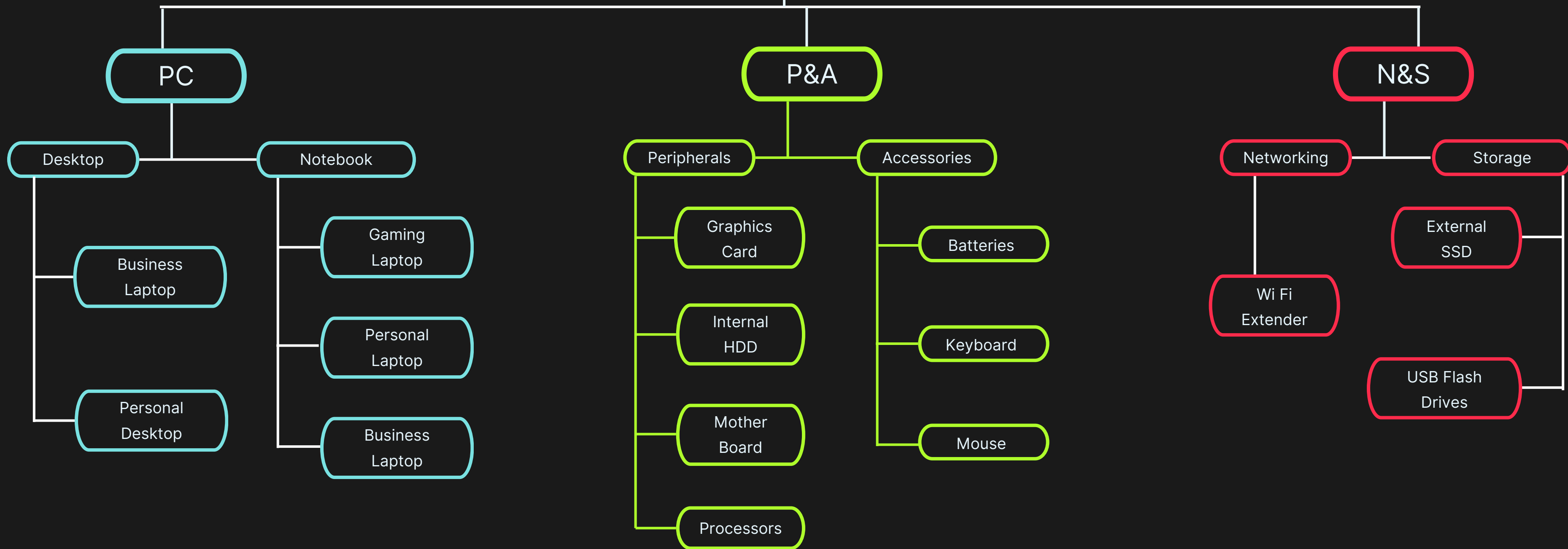
Fiscal Year -

SEPTEMBER 2019 - AUGUST 2020 -> FY 2020

SEPTEMBER 2020 - AUGUST 2021 -> FY 2021

Ad-Hoc Requests and Tools

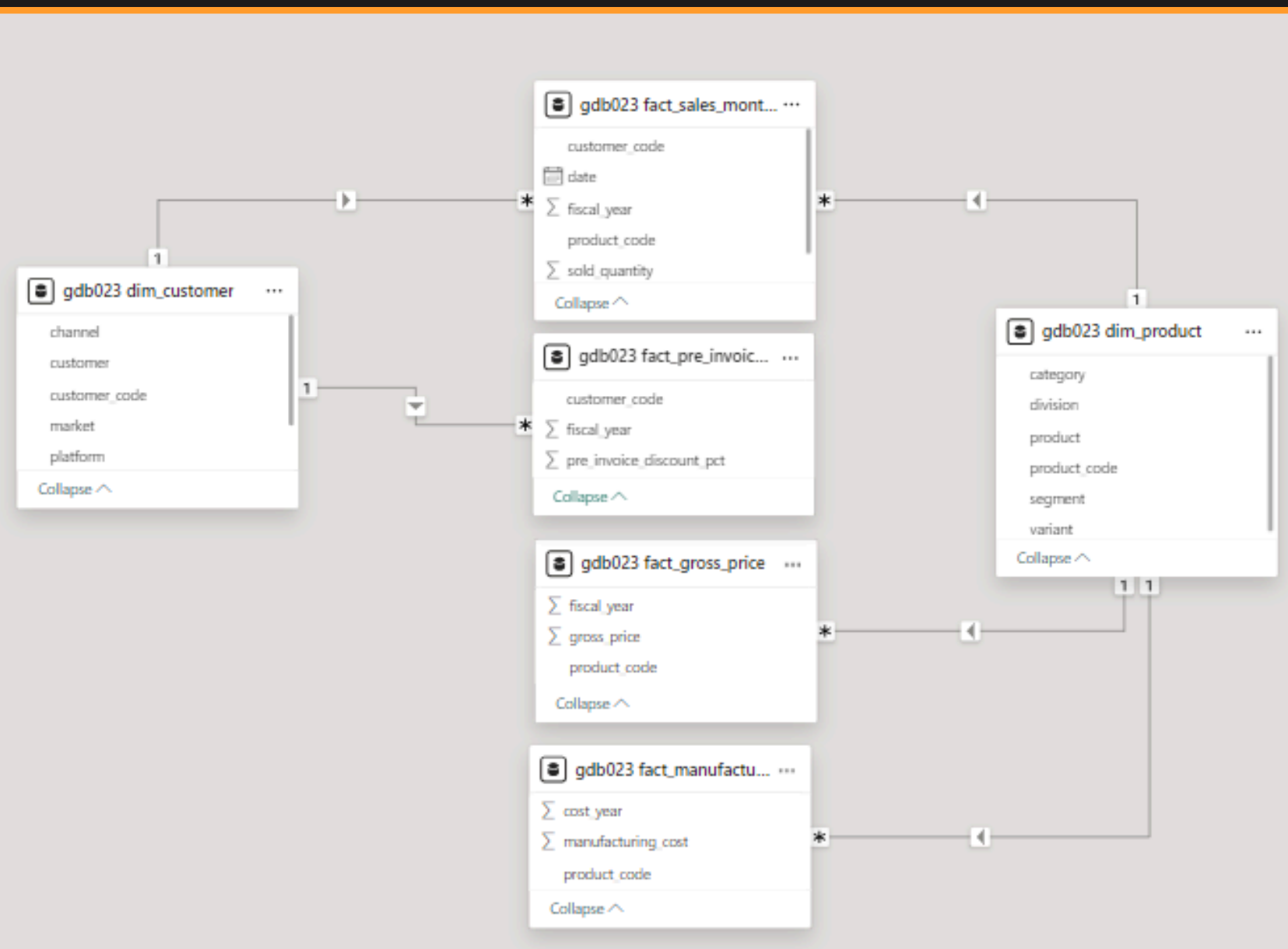1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

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_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

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
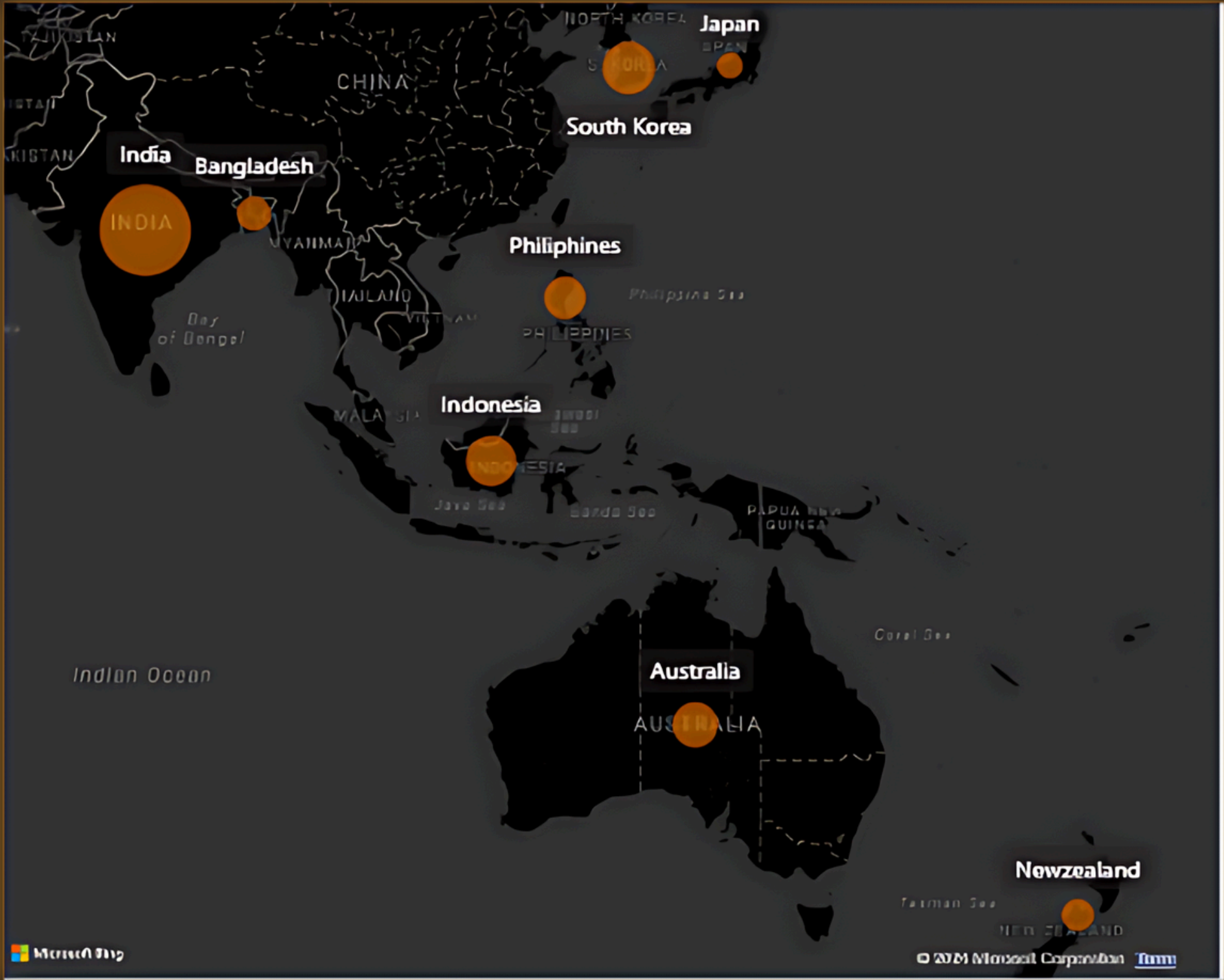
Insight:

In the APAC Region Most Gross sales are coming from INDIA and Leat sales are coming from JAPAN

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

2020_UNIQUE_PRODUCTS	2021_UNIQUE_PRODUCTS	PCT_CHG
245	334	36.33%
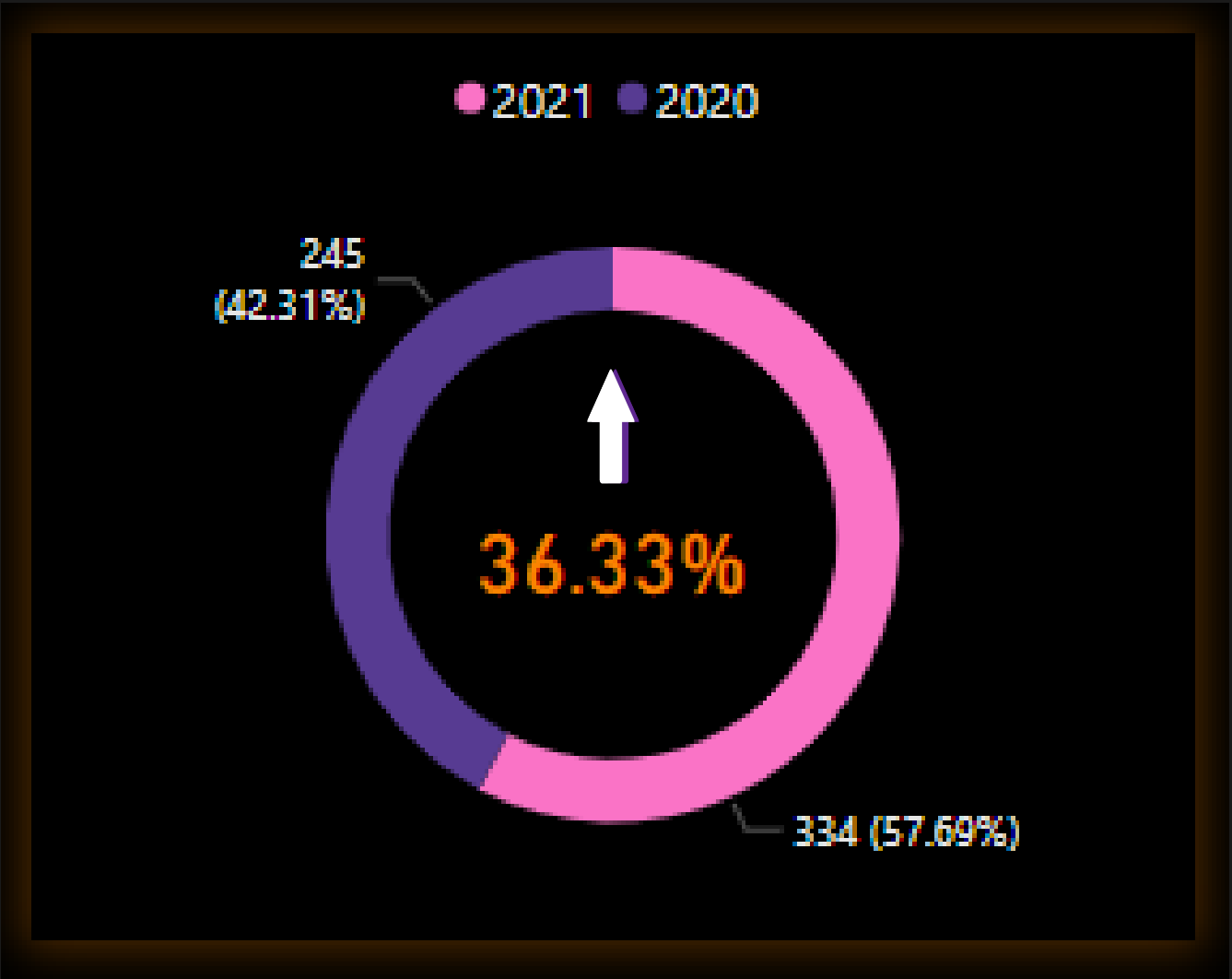
Insight:

The Increase was 36.33%, So we can say that the demand and production both increased in the Fiscal Year 2021

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

SEGMENT	PRODUCT_CNT
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9
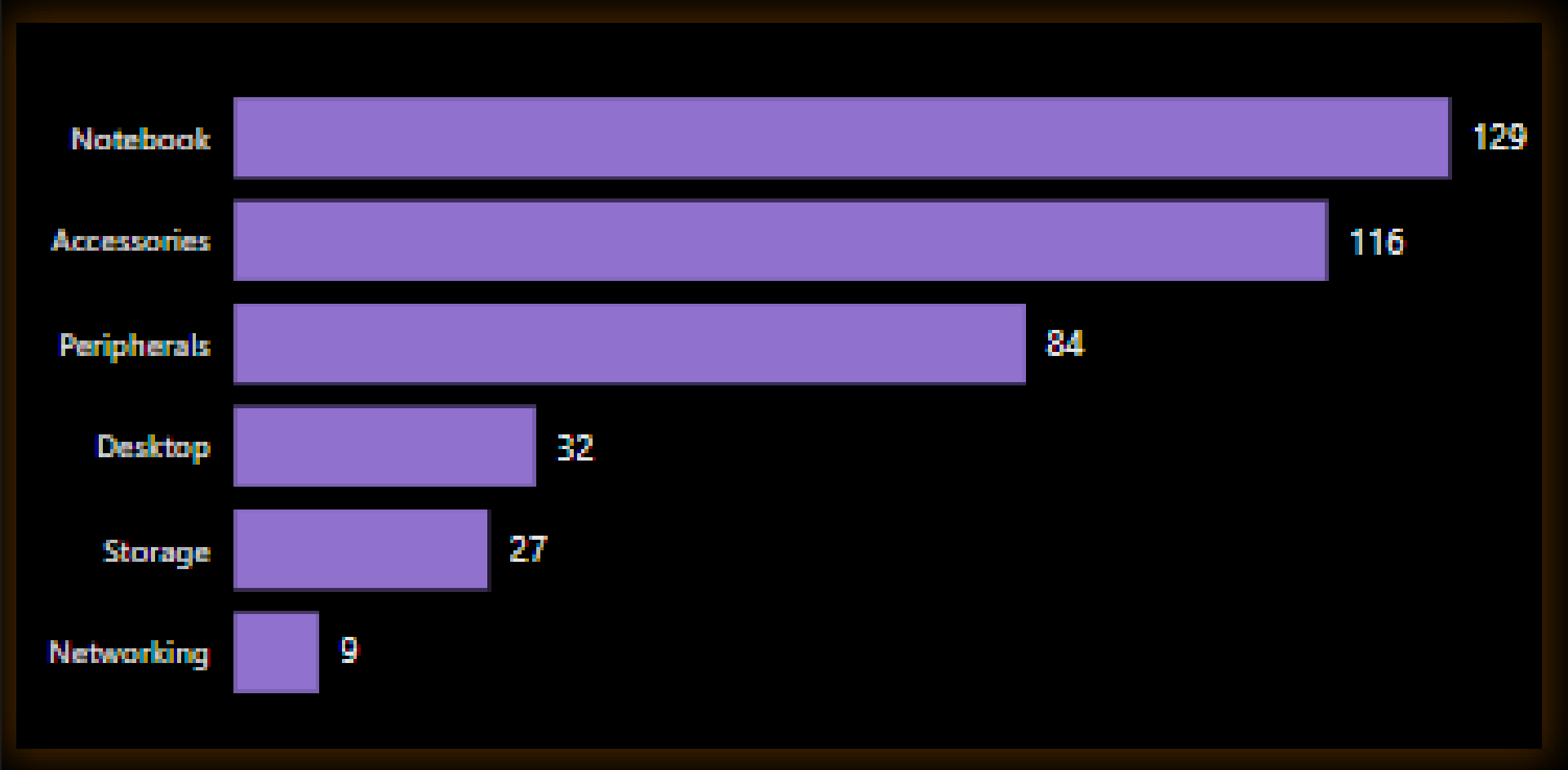
4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment product_count_2020, product_count_2021, difference

SEGMENT	PRODUCT_CNT_FOR_20	PRODUCT_CNT_FOR_21	DIFF
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

Insight:

Production and Demand both increased for the Segments of Accessories and Notebook.

Storage and Networking didn't show any effective growth.
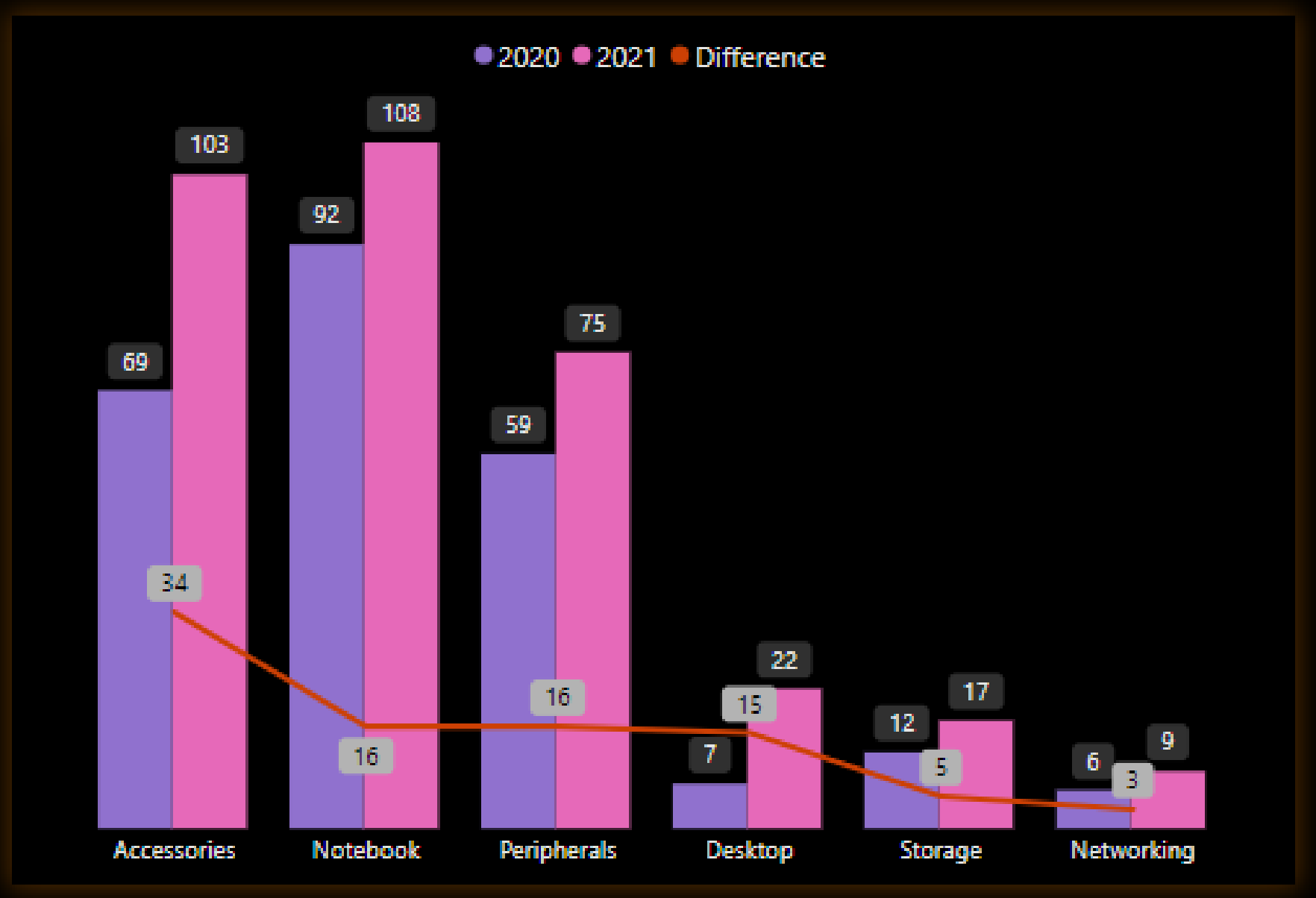
5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, product_code, product, manufacturing_cost

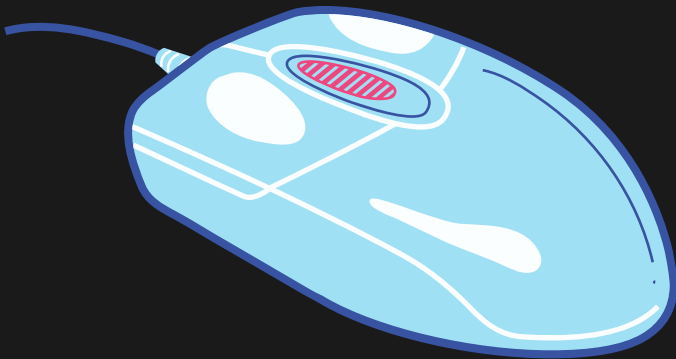| PRODUCT_CODE	PRODUCT	CATEGORY	MANUFACTURING_COST
A6120110206	AQ HOME Allin1 Gen 2	Personal Desktop	240.5364
A2118150101	AQ Master wired x1 Ms	Mouse	0.8920

$240.54

$0.89

AQ Home Allin1 Gen2

AQ Master wired x1 Ms

Insight:

Personal Desktop: AQ Home Allin1 Gen2 (Variant: Plus3) has the highest manufacturing cost.

Mouse: AQ Master wired x1 Ms (Variant: Standard1) has the lowest manufacturing cost.

6. Generate a report that 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	CUSTOMER_CODE	AVERAGE_DISCOUNT_PERCENTAGE
Flipkart	90002009	30.83%
Viveks	90002006	30.38%
Ezone	90002003	30.28%
Croma	90002002	30.25%
Amazon	90002016	29.33%

Insight:

The Maximum average pre-invoice discount was given to Flipkart.

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

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

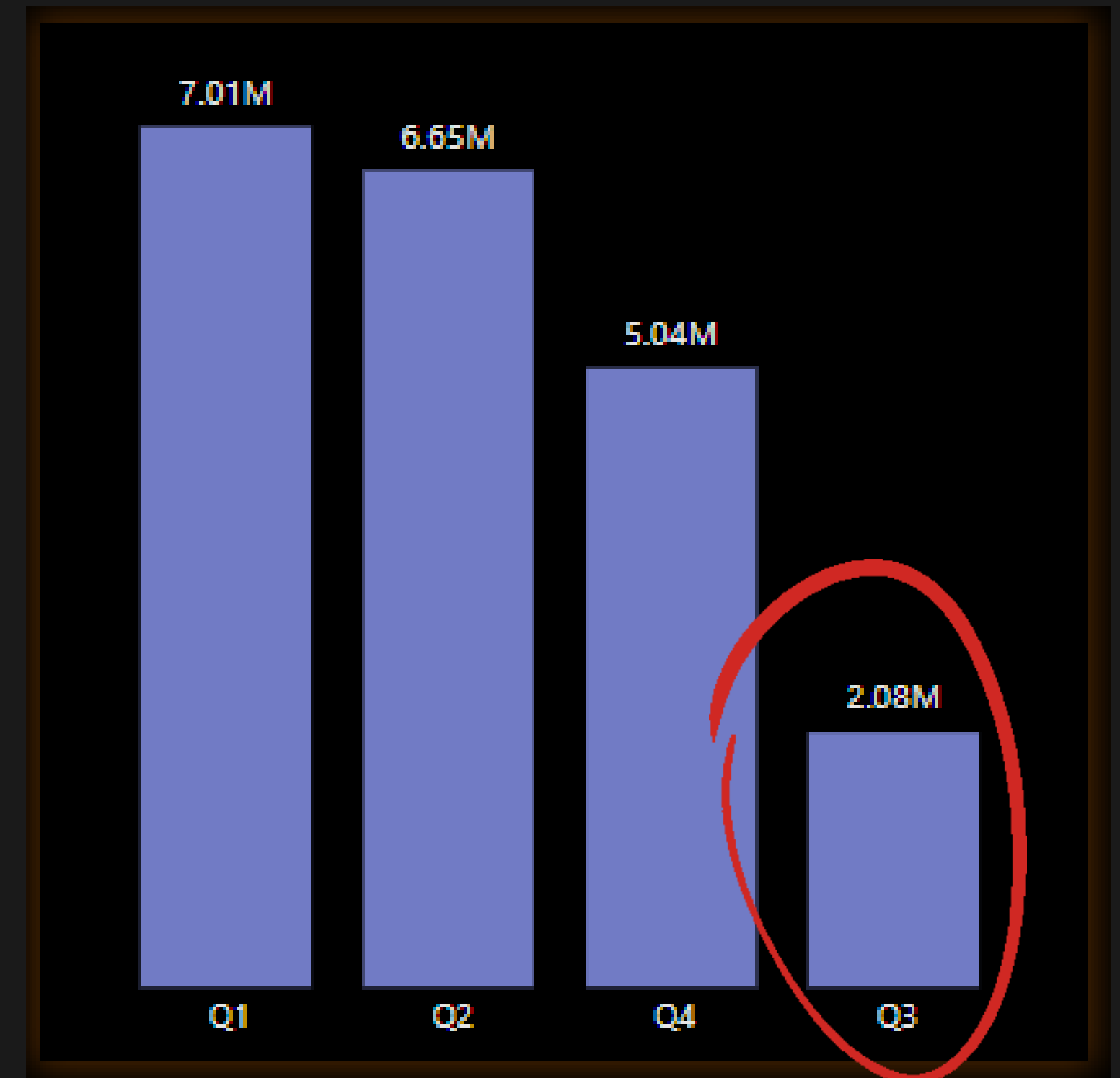| MONTH	FISCAL_YEAR	GROSS_SALE
September	2020	9.09 M
October	2020	10.38 M
November	2020	15.23 M
December	2020	9.76 M
January	2020	9.58 M
February	2020	8.08 M
March	2020	0.77 M
April	2020	0.80 M
May	2020	1.59 M
June	2020	3.43 M
July	2020	5.15 M
August	2020	5.64 M
September	2021	19.53 M
October	2021	21.02 M
November	2021	32.25 M
December	2021	20.41 M
January	2021	19.57 M
February	2021	15.99 M
March	2021	19.15 M
April	2021	11.48 M
May	2021	19.20 M
June	2021	15.46 M
July	2021	19.04 M
August	2021	11.32 M
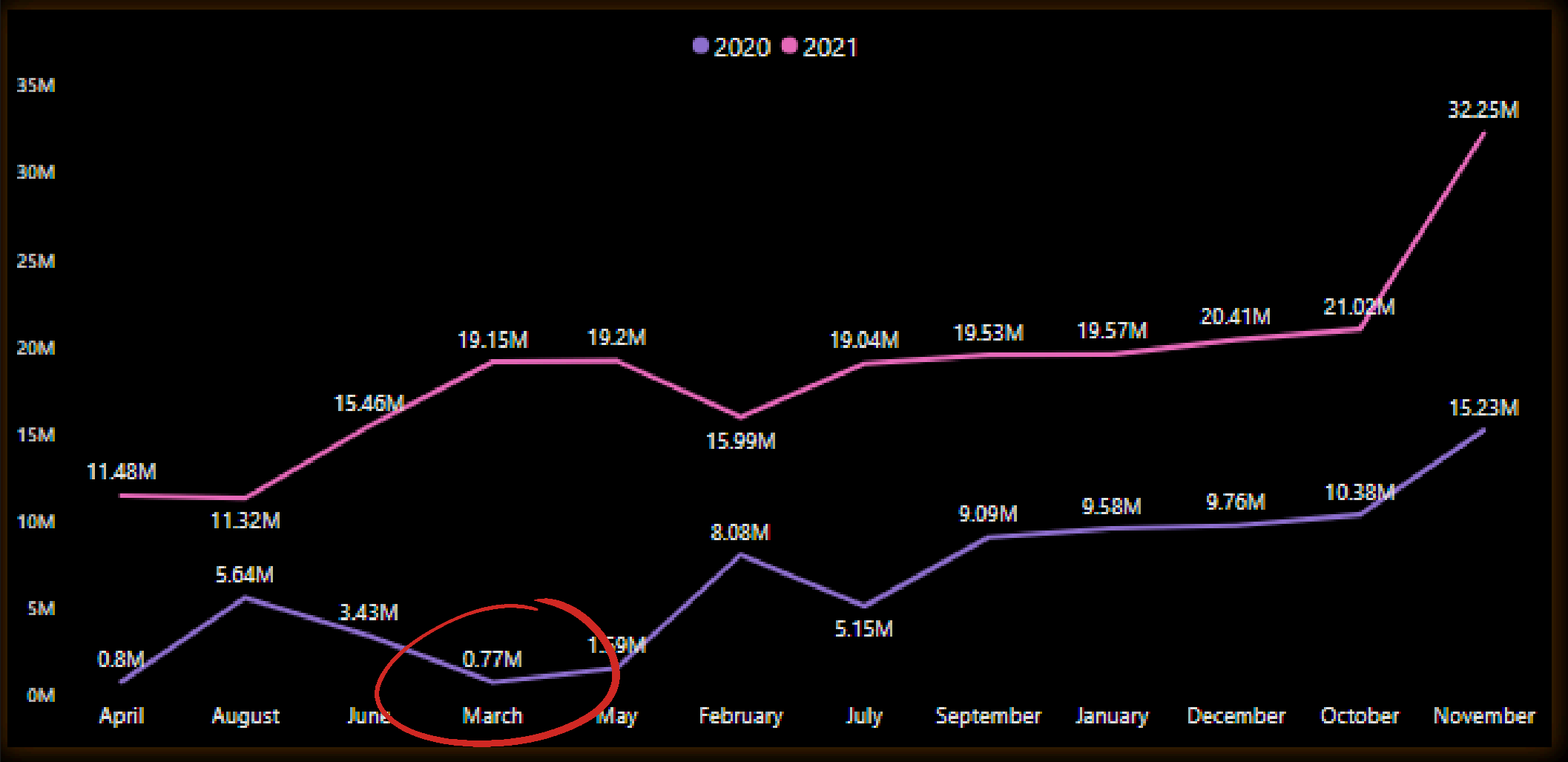
Reason -

COVID 19

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

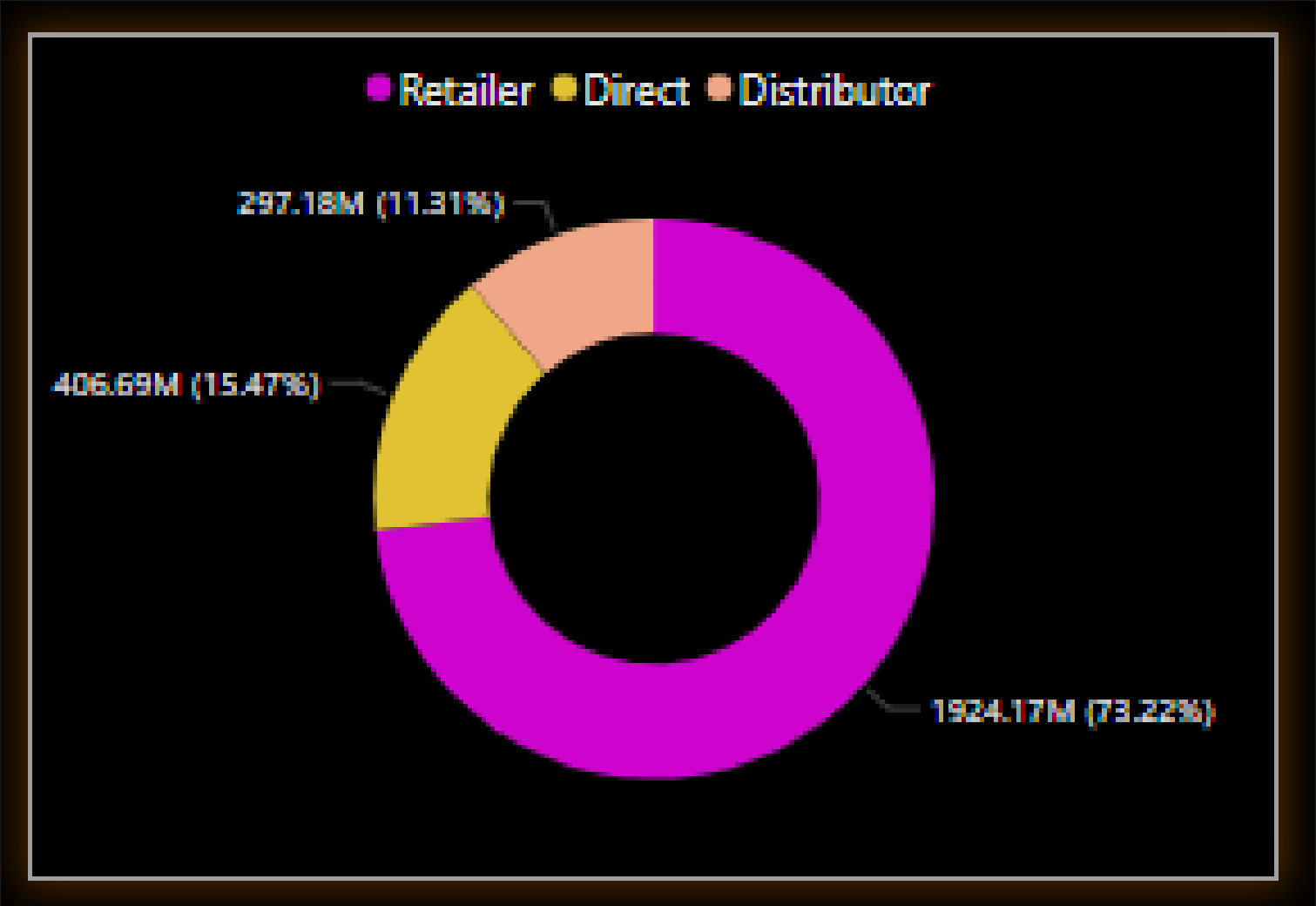| QUARTERS	TOTAL_SOLD_QUANTITY
Q1	7.01 M
Q2	6.65 M
Q4	5.04 M
Q3	2.08 M

Q1 - Sep, Oct, Nov

Q2 - Dec, Jan, Feb

Q3 - Mar, Apr, May

Q4 - Jun, Jul, Aug

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

Insight:

Maximum Gross sales are coming from "Retailer" which is 73.22% of the Total Sales followed by the "Direct" Channel (15.47%)
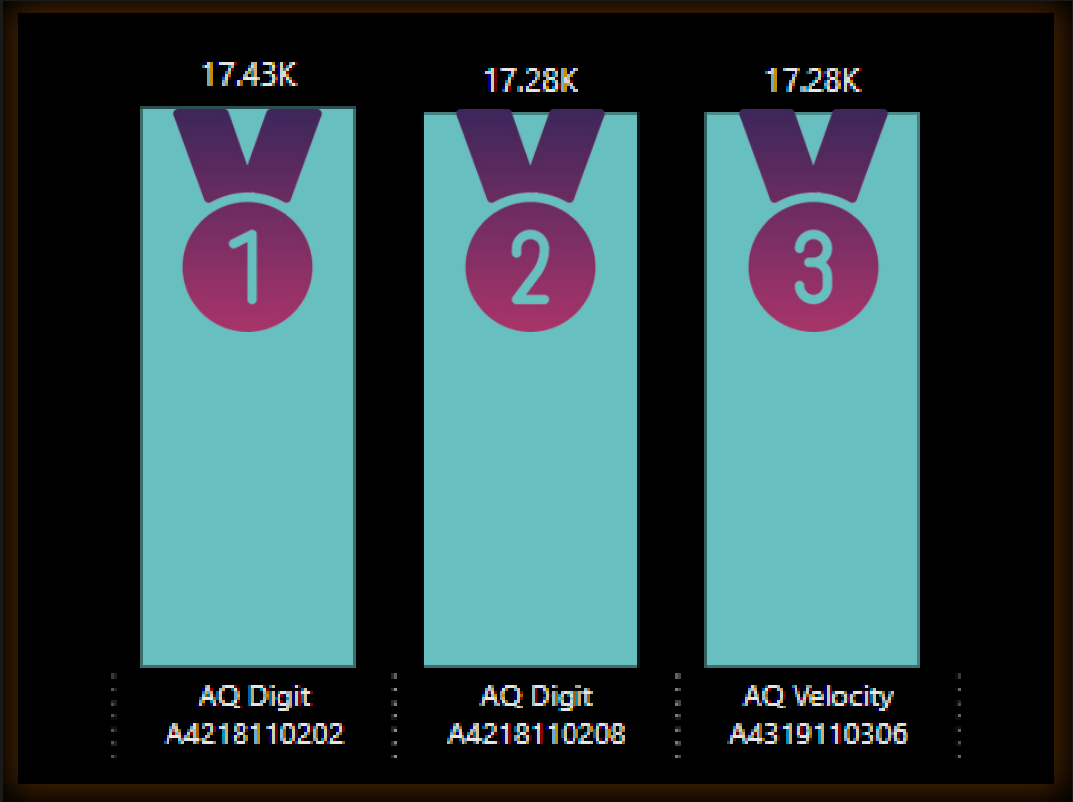
10. Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021? The final output contains these fields, division, product_code

DIVISION	PRODUCT_CODE	PRODUCT	TOTAL_SOLD_QUANTITY	RANK_ORDER
N & S	A6720160103	AQ Pen Drive 2 IN 1	0.70 M	1
N & S	A6818160202	AQ Pen Drive DRC	0.69 M	2
N & S	A6819160203	AQ Pen Drive DRC	0.68 M	3
P & A	A2319150302	AQ Gamers Ms	0.43 M	1
P & A	A2520150501	AQ Maxima Ms	0.42 M	2
P & A	A2520150504	AQ Maxima Ms	0.42 M	3
PC	A4218110202	AQ Digit	0.02 M	1
PC	A4319110306	AQ Velocity	0.02 M	2
PC	A4218110208	AQ Digit	0.02 M	3

Insight:

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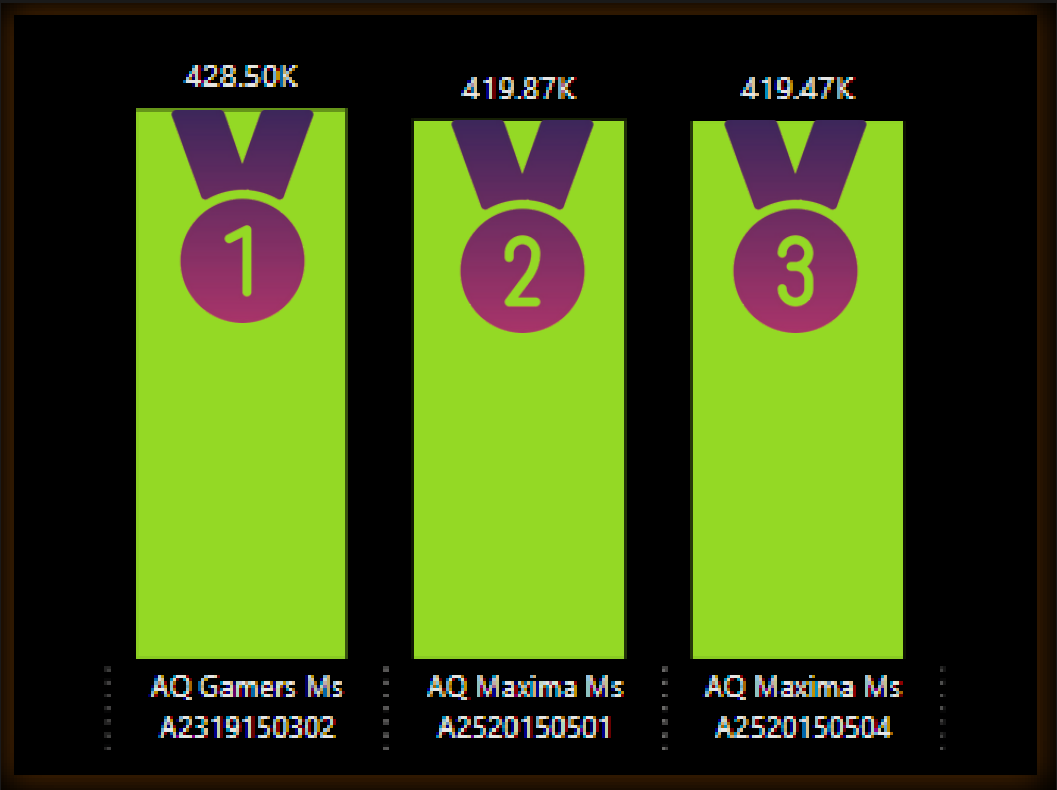
Division - PC

17.43K   17.28K   17.28K

1   2   3

AQ Digit   AQ Digit   AQ Velocity
A4218110202   A4218110208   A4319110306

Standard Blue   **Plus Red**   **Premium Misty Green**

Division - P&A

428.50K   419.87K   419.47K

1   2   3

AQ Gamers Ms   AQ Maxima Ms   AQ Maxima Ms
A2319150302   A2520150501   A2520150504

Standard 2   **Standard 1**   **Plus 2**

Division - N&S

701.37K   688.00K   676.25K

1   2   3

AQ Pen Drive 2 IN 1   AQ Pen Drive DRC   AQ Pen Drive DRC
A6720160103   A6818160202   A6819160203

Premium   **Plus**   **Premium**