



Atliq Hardwares



# Consumer Goods Ad-Hoc Insights

– By Pramod Ganar



#codebasicsresumeprojectchallenge

# Agenda

- Company & Problem Statement
- Database Schema
- Ad-Hoc request, queried results, visualizations & insights.



# Company & Problem statement

- Leading computer hardware producers in India and well expanded in other countries.

## Problem Statement

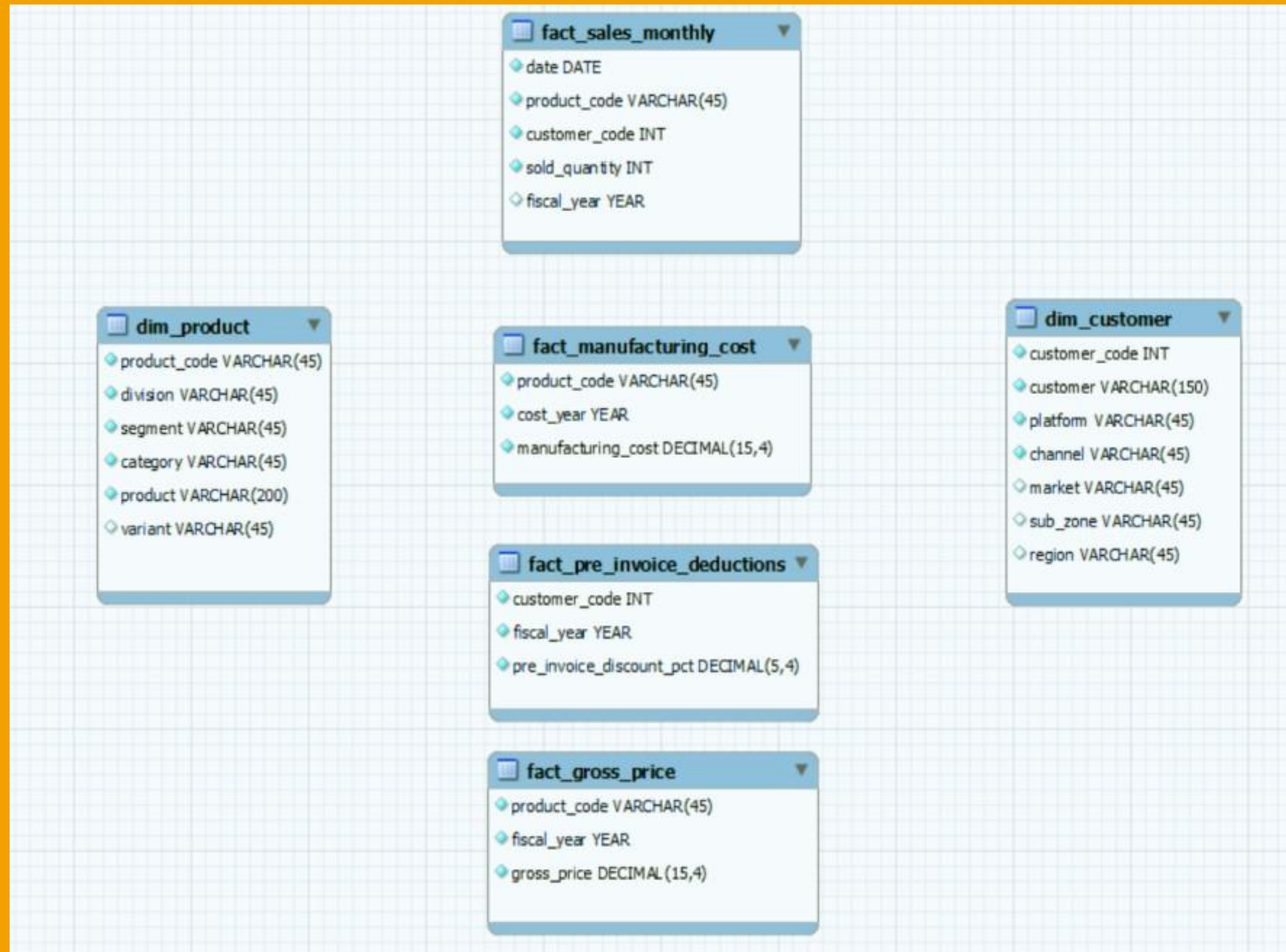
There are not enough insights to make quick and smart data-informed decisions.

- Expand data analytics team by adding several junior data analysts.
- Decided to conduct a SQL challenge to hire junior data analysts.

## Task

- There are 10 ad-hoc requests for which the business needs insights.
- Task is to write SQL queries to answer these requests.
- Create presentation to show insights to Top-Level Management.

# Database Schema



## Request 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  |
|   | Philiphines |
|   | South Korea |



# Atliq Exclusive operates in 8 markets in APAC region



## Request 2

What is the **percentage** of unique product increase in **2021** vs. **2020**? The final output contains these fields:

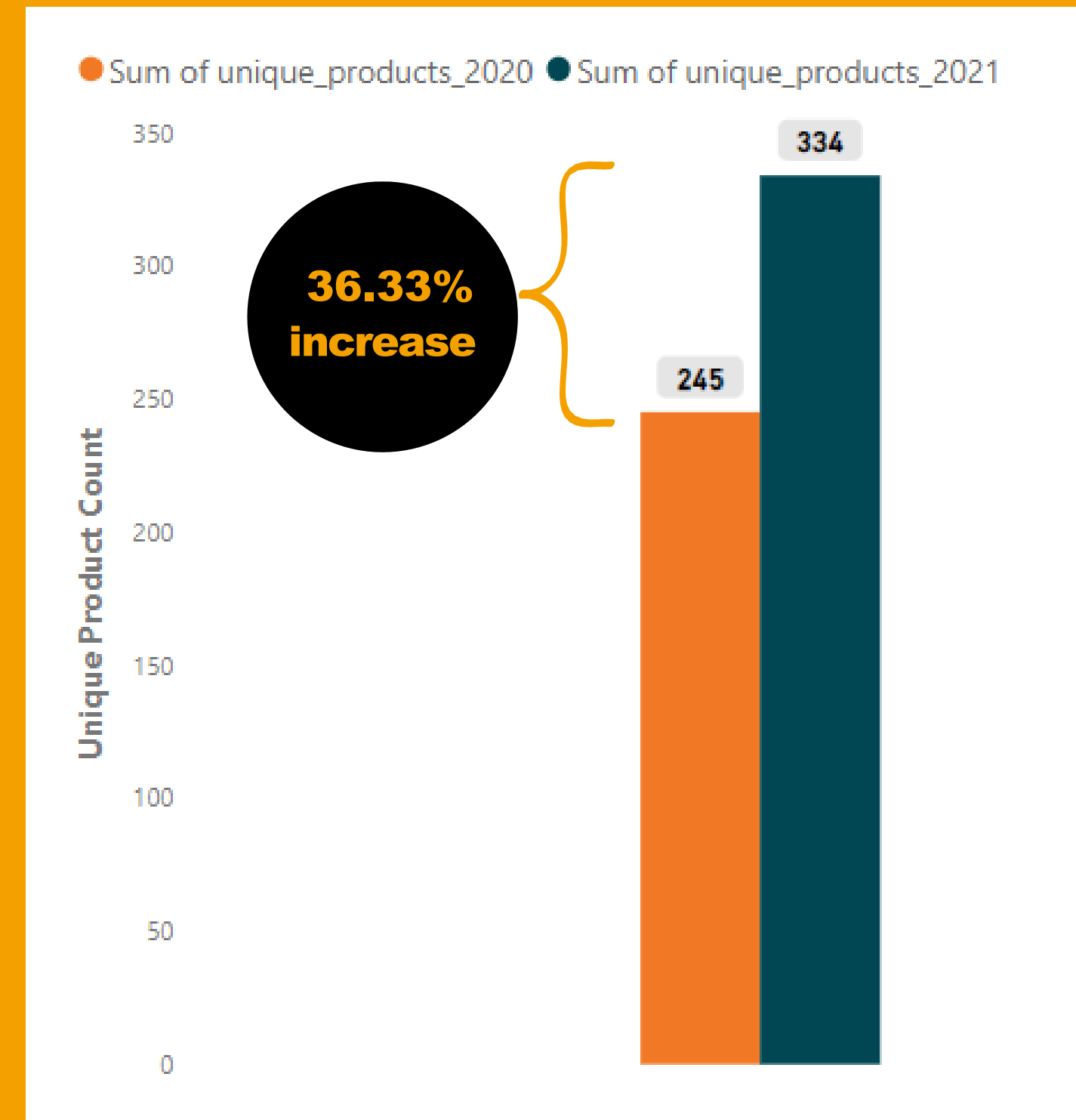
- unique\_products\_2020
- unique\_products\_2021
- percentage\_chg

|   | unique_products_2020 | unique_products_2021 | percentage_chg |
|---|----------------------|----------------------|----------------|
| ▶ | 245                  | 334                  | 36.33%         |

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

Around 89 unique products were produced in 2021.

There is 36.33% of increase in unique products from 2020 to 2021.



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## Request 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

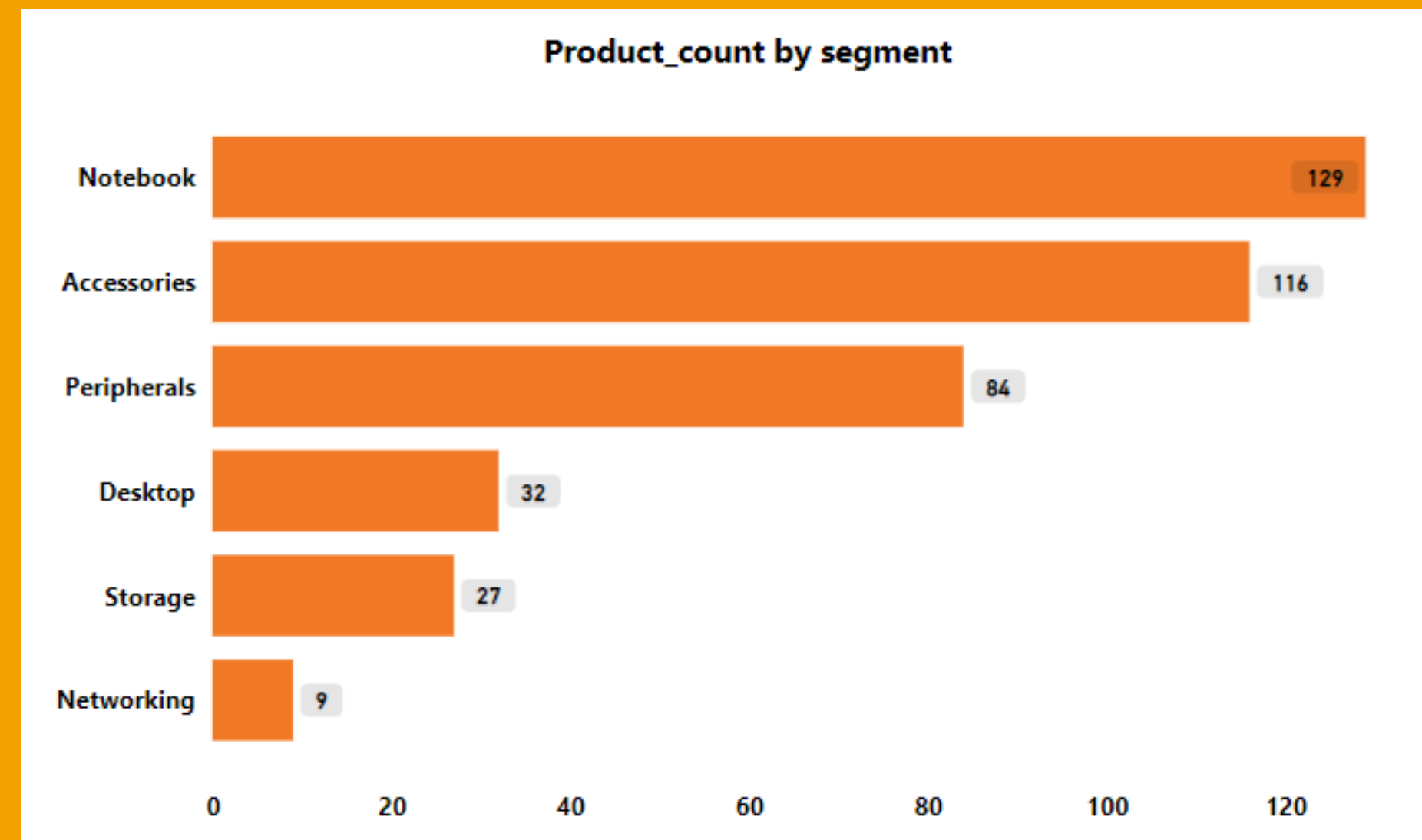
|   | segment     | product_count |
|---|-------------|---------------|
| ▶ | Notebook    | 129           |
|   | Accessories | 116           |
|   | Peripherals | 84            |
|   | Desktop     | 32            |
|   | Storage     | 27            |
|   | Networking  | 9             |

# Report of Unique product counts under each segment.

Atliq hardware basically produces products in six segments.

Notebook segment has recorded maximum unique products around 129 followed by Accessories.

Whereas Storage & Networking has recorded least product count.



## Request 4

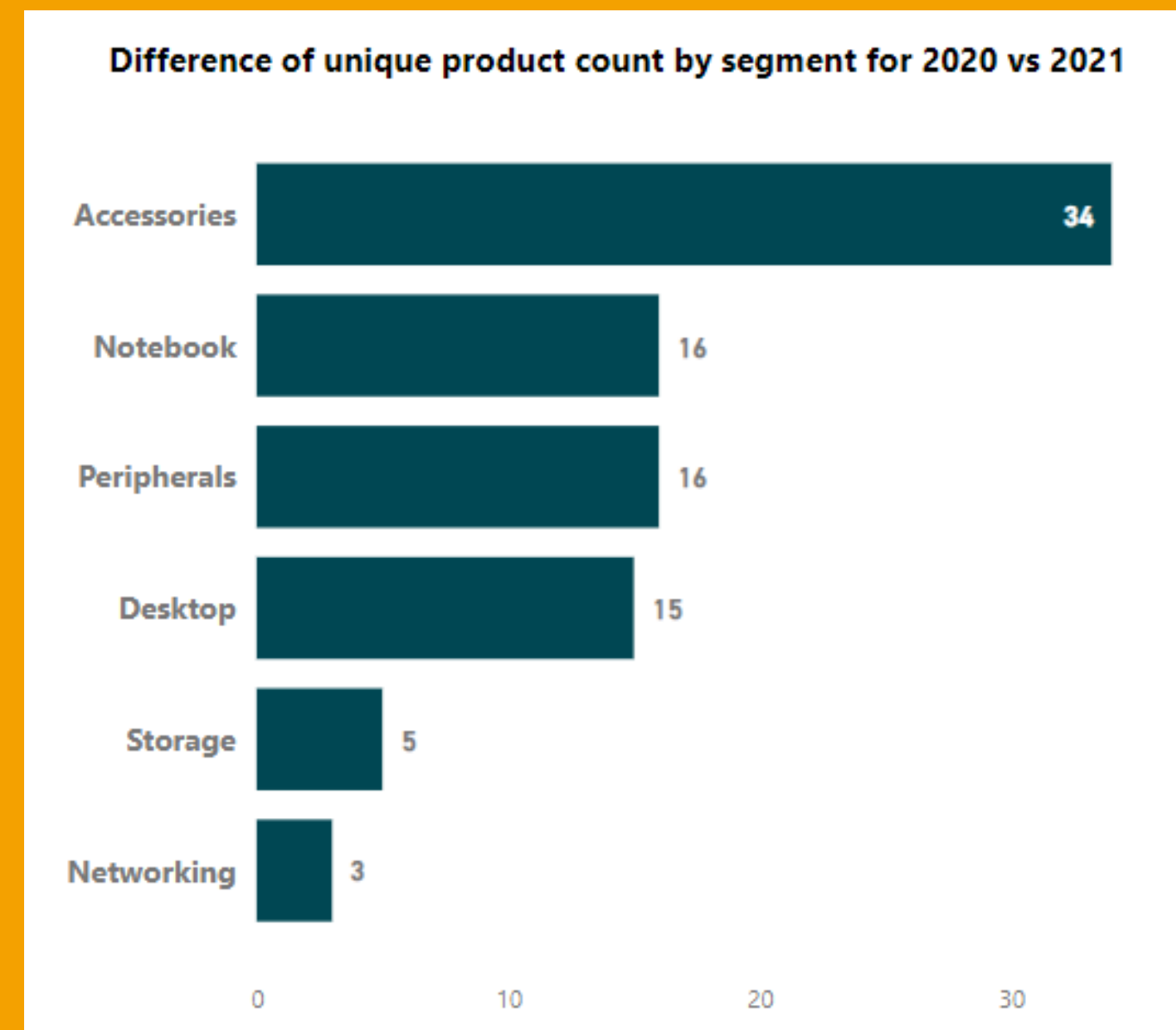
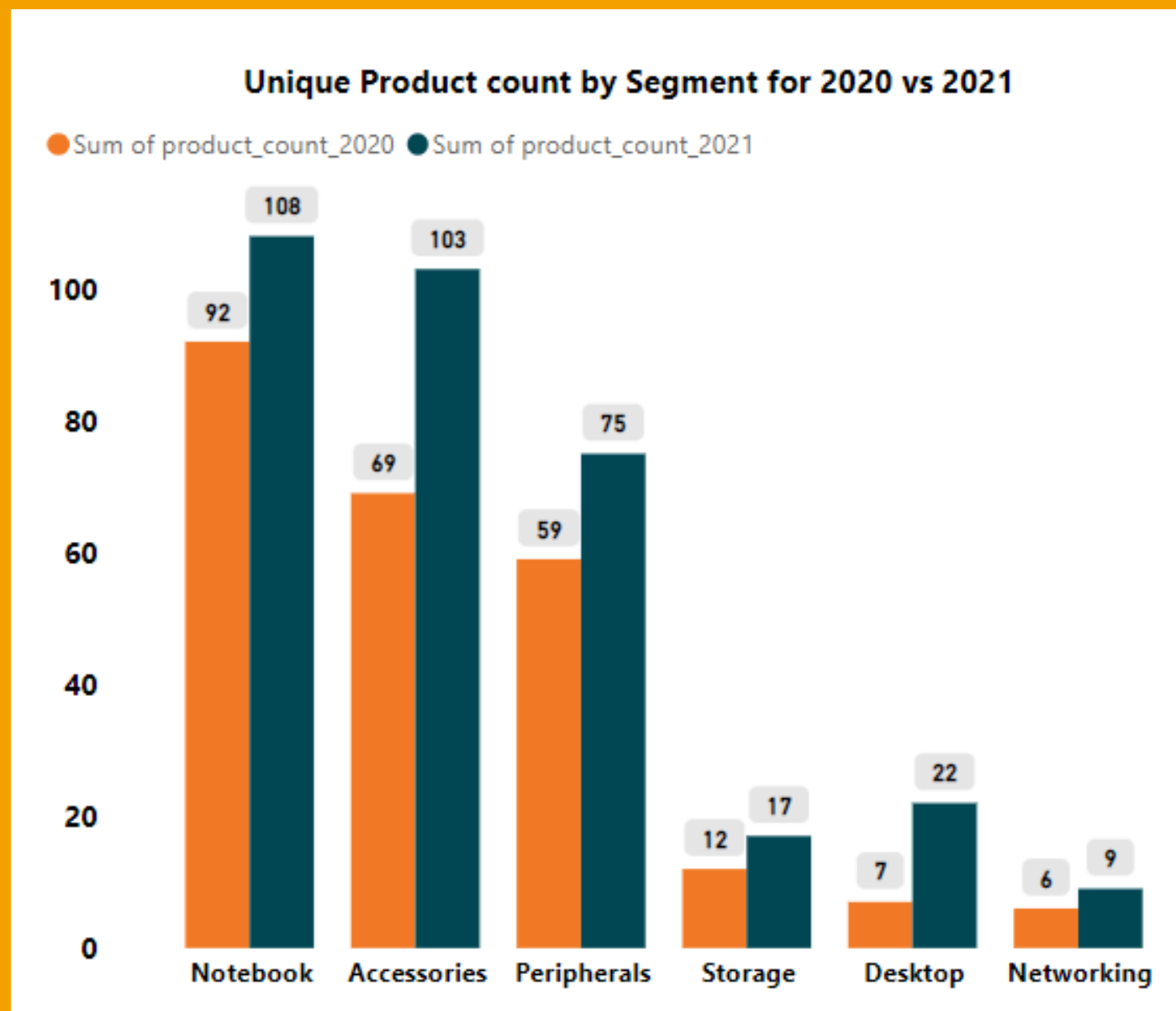
Follow-up: Which segment had the **most increase** in unique products in **2021 vs 2020**? The final output contains these fields:

- segment
- product\_count\_2020
- product\_count\_2021
- difference

|   | segment     | product_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          |

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

Accessories segment has the most increase in unique products with a difference of 34 in 2021 vs 2020.



## Request 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               | manufacturing_cost |
|---|--------------|-----------------------|--------------------|
| ▶ | A2118150101  | AQ Master wired x1 Ms | 0.89               |
|   | A6120110206  | AQ HOME Allin1 Gen 2  | 240.54             |

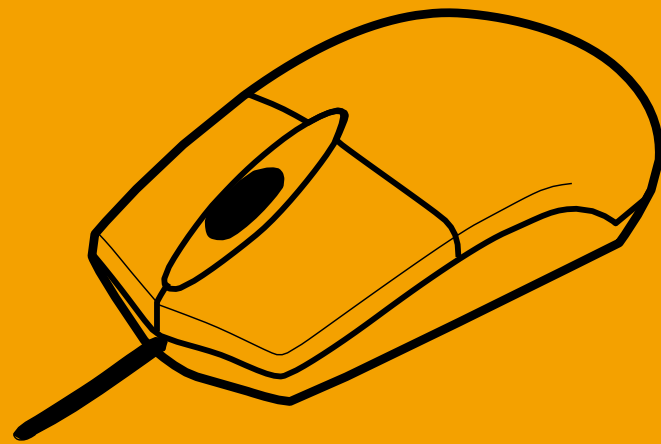


Which products that have the **highest** and **lowest** manufacturing costs.



**AQ HOME Allin1 Gen 2**

Personal Desktop has highest manufacturing cost of  
\$240.54



**AQ Master wired x1 Ms**

Mouse has lowest manufacturing cost of \$0.89

## Request 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:

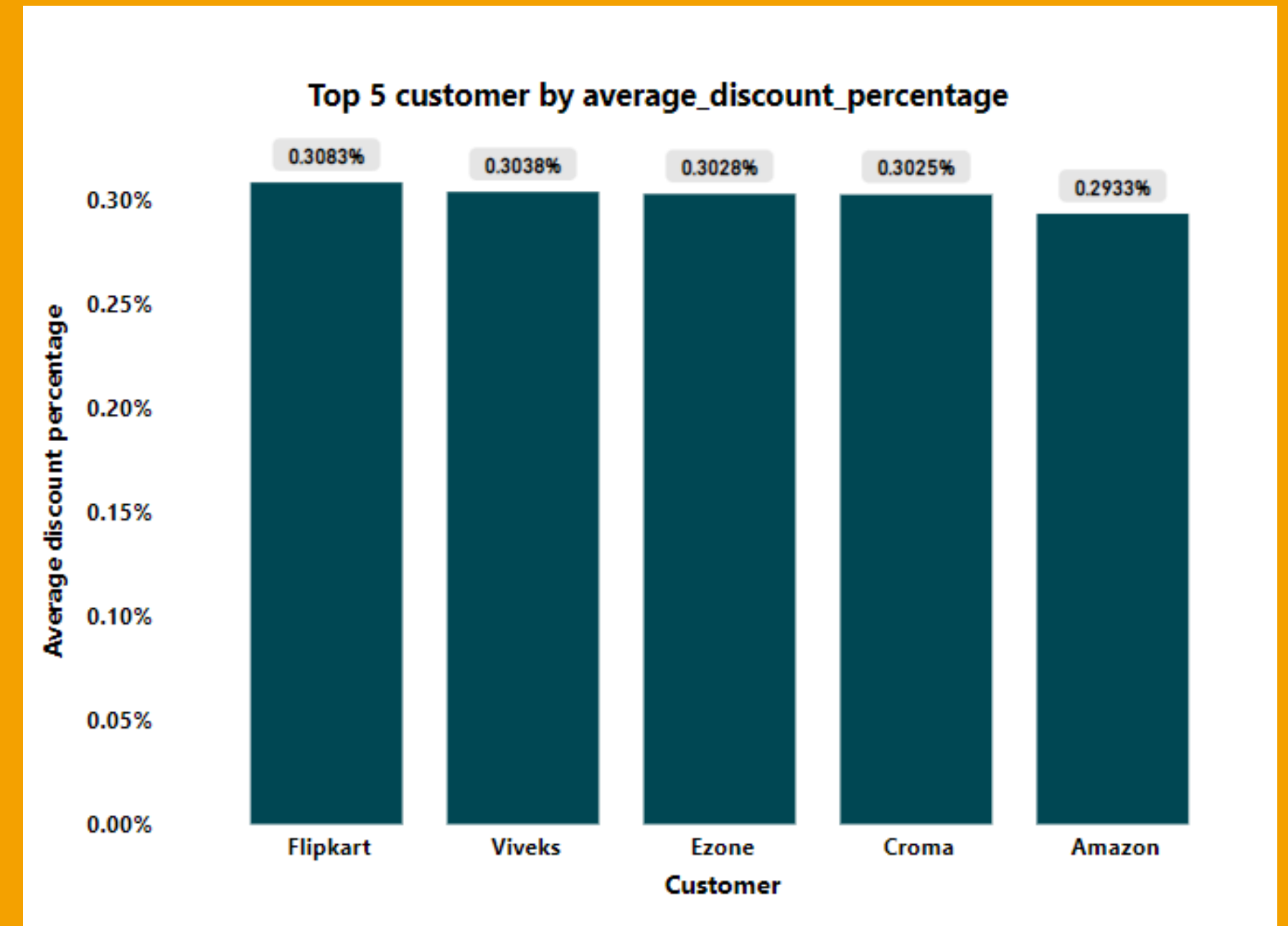
- `customer_code`
- `customer`
- `average_discount_percentage`

|   | customer_code | customer | average_discount_percentage |
|---|---------------|----------|-----------------------------|
| ▶ | 90002009      | Flipkart | 0.3083%                     |
|   | 90002006      | Viveks   | 0.3038%                     |
|   | 90002003      | Ezone    | 0.3028%                     |
|   | 90002002      | Croma    | 0.3025%                     |
|   | 90002016      | Amazon   | 0.2933%                     |

Which are the **top 5 customers** who received an average high pre\_invoice\_discount\_pct for the fiscal year **2021** and in the **Indian market**.

For Indian market in FY 2021 the top 5 customers are Flipkart, Viveks, Ezone, Croma & Amazon.

Flipkart has recorded the highest average pre-invoice discount percentage followed by Viveks, Ezone, Croma & Amazon.



## Request 7

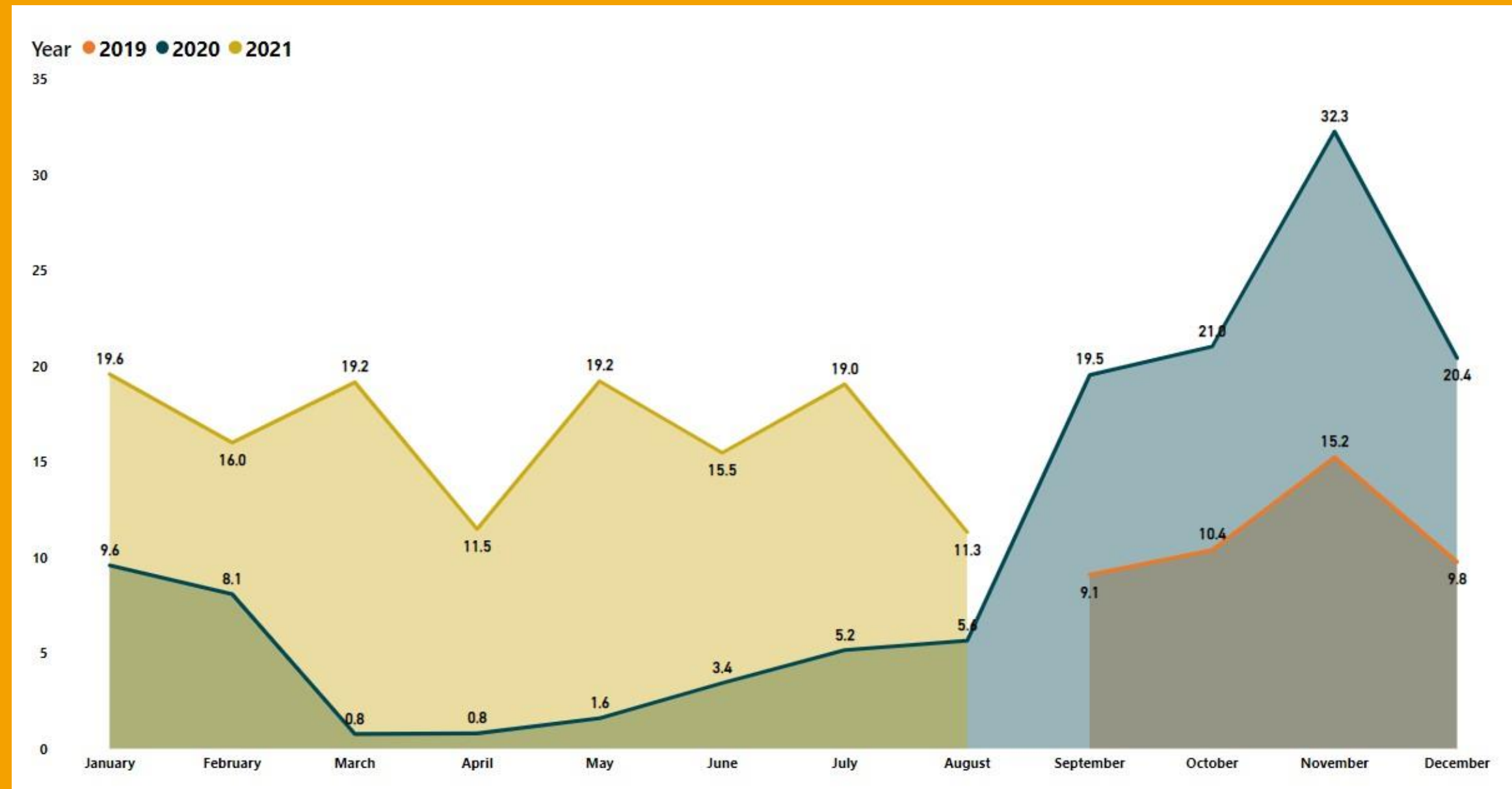
Get the complete report of the Gross sales amount for the customer “**Atliq Exclusive**” for each month. This analysis helps to get an idea of **low** and **high-performing months** and take strategic decisions. The final report contains these columns:

- Month
- Year
- Gross sales Amount

|   | Month     | Year | Gross sales Amount |
|---|-----------|------|--------------------|
| ▶ | September | 2019 | 9.09m              |
|   | October   | 2019 | 10.38m             |
|   | November  | 2019 | 15.23m             |
|   | December  | 2019 | 9.76m              |
|   | January   | 2020 | 9.58m              |
|   | February  | 2020 | 8.08m              |
|   | March     | 2020 | 0.77m              |
|   | April     | 2020 | 0.80m              |
|   | May       | 2020 | 1.59m              |
|   | June      | 2020 | 3.43m              |
|   | July      | 2020 | 5.15m              |
|   | August    | 2020 | 5.64m              |
|   | September | 2020 | 19.53m             |
|   | October   | 2020 | 21.02m             |
|   | November  | 2020 | 32.25m             |
|   | December  | 2020 | 20.41m             |
|   | January   | 2021 | 19.57m             |
|   | February  | 2021 | 15.99m             |
|   | March     | 2021 | 19.15m             |
|   | April     | 2021 | 11.48m             |
|   | May       | 2021 | 19.20m             |
|   | June      | 2021 | 15.46m             |
|   | July      | 2021 | 19.04m             |
|   | August    | 2021 | 11.32m             |

# Gross sales amount for the customer “Atliq Exclusive” for each month.

- For each year month wise gross sales amount has been visualized for Atliq Exclusive.
- Atliq Exclusive has recorded highest gross sales amount in the month of november 2020 that is 32.3M
- Lowest gross sales amount was recorded in march 2020 that is 0.8M due to covid-19 crisis.





## Request 8

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

The final output contains these fields sorted by the total\_sold\_quantity:

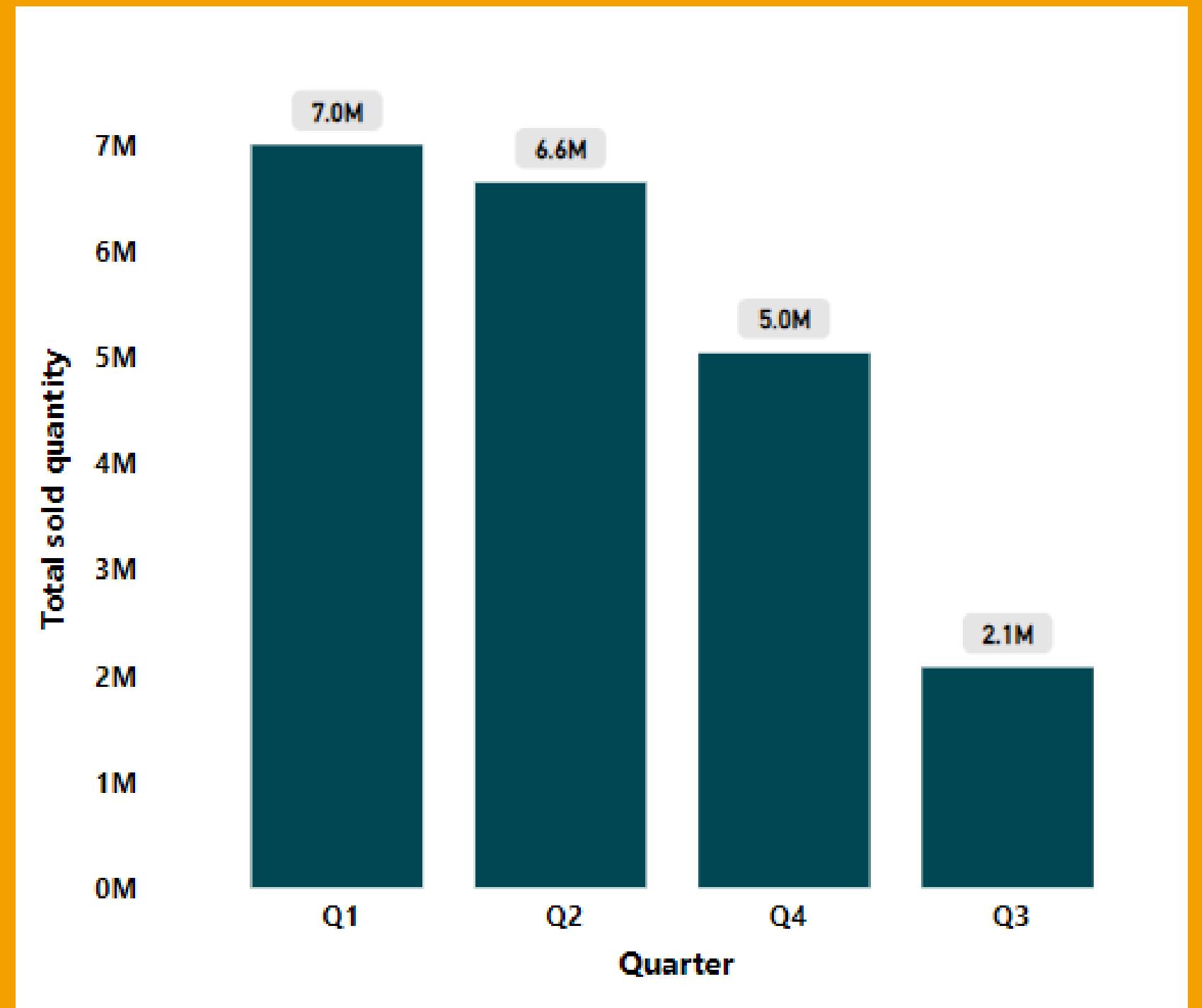
- Quarter
- total\_sold\_quantity

|   | Quarter | total_sold_quantity |
|---|---------|---------------------|
| ▶ | Q1      | 7005619             |
|   | Q2      | 6649642             |
|   | Q4      | 5042541             |
|   | Q3      | 2075087             |

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

In 2020 Quarter 1 has recorded maximum total sold quantity of 7.0M.

Quarter 3 has recorded lowest total sold quantity of 2.1M due to covid-19 crisis.



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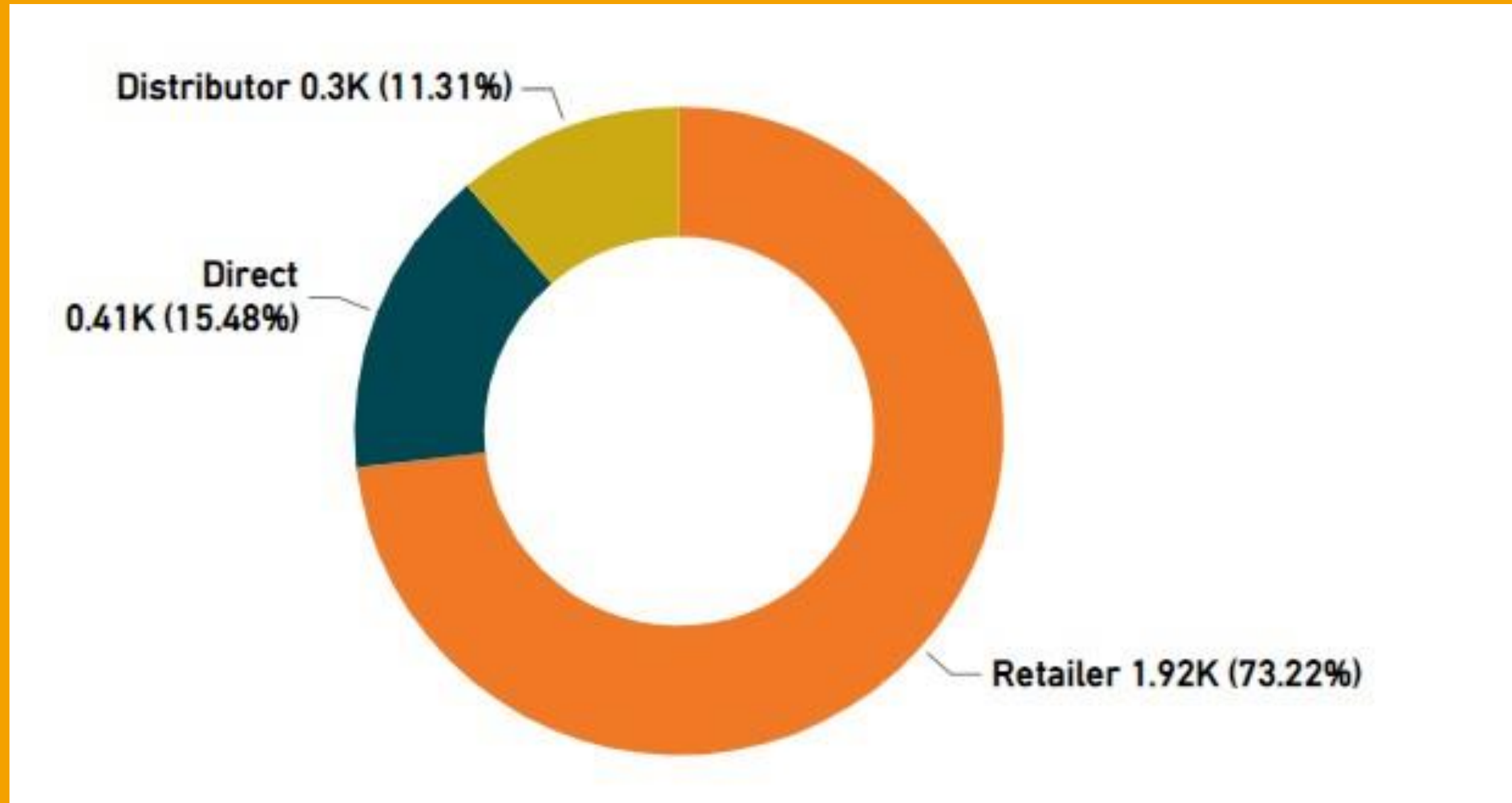
## Request 9

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 | percentage |
|---|-------------|-----------------|------------|
| ▶ | Retailer    | 1924.17         | 73.22%     |
|   | Direct      | 406.69          | 15.47%     |
|   | Distributor | 297.18          | 11.31%     |

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



Retailers have majorly contributed in FY 2021 to bring more gross sales around 73.22%. Followed by Direct (15.48%) & Distributor (11.31%).

## Request 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:

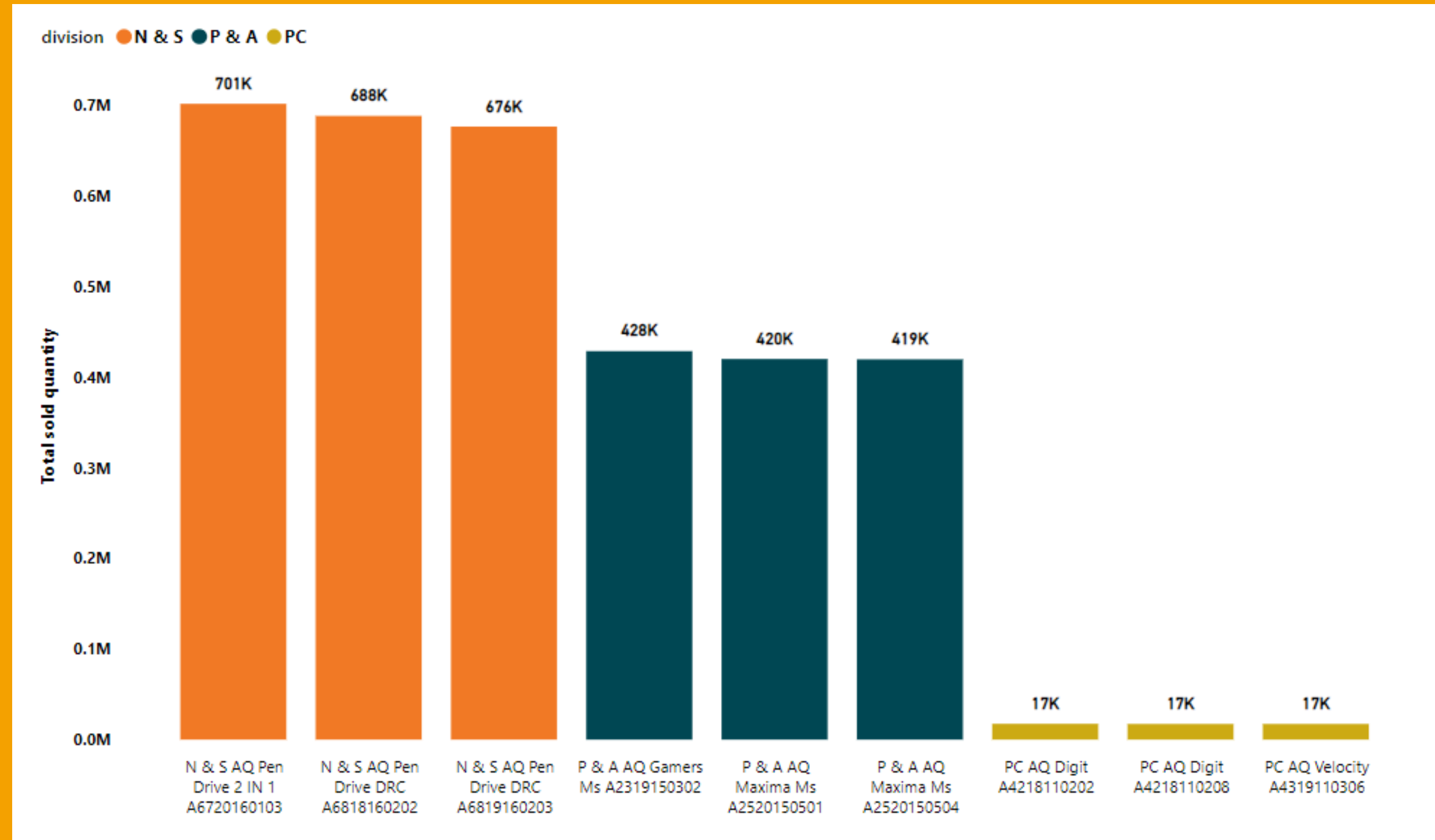
- division
- product\_code
- product
- total\_sold\_quantity
- rank\_order

|   | 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          |



# Which are the **top 3 products** in each division that have a high total\_sold\_quantity in the fiscal\_year 2021?

- AQ Pen Drive 2 IN 1, AQ Gamers Ms & AQ Digit are the top 3 selling products division wise in FY 2021.
- In division N&S has recorded higher sales compared to P&A and PC.
- Lowest sales are recorded by division PC.





# Thank You

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