



# ATLIQ HARDWARES INSIGHTS

DOMAIN : CONSUMER GOODS

TARGET – AUDIENCE : TOP – LEVEL MANAGEMENT

CHALLENGE # 4

PRESENTED BY : YASH SULE



## OUTLINE

About AtliQ Hardwares

About Challenge

Ad-Hoc Requests and Results

Graphical Outputs and Insights

# ABOUT ATLIQ HARDWARE (MARKETS)

- **Atliq Hardwares (imaginary company)** is one of the leading computer hardware producers in India and well expanded in other countries too.

Region	Sub zone	Market
Asia Pacific	Australia & New Zealand	Australia
		New Zealand
	India	India
	Rest Of Asia	Bangladesh
		China
		Indonesia
		Japan
		Pakistan
		Philippines
		South Korea

Region	Sub zone	Market
Europe	Northeast Asia	Austria
		Germany
		Netherlands
		Norway
		Poland
		Sweden
		United Kingdom
	Southeast Asia	France
		Italy
		Portugal
		Spain

Region	Sub zone	Market
Latin America	Latin America	Brazil
		Chile
		Columbia
		Mexico

Region	Sub zone	Market
North America	North America	Canada
		USA

## ABOUT ATLIQ HARDWARE (CUSTOMERS)

- There are over **74 customers** across there **27 markets**.
- AtliQ Hardware uses **2 platforms** as a source of marketing such as "**Brick & Mortar**" and "**E-Commerce**" to offer their company services or sell their products.
- AtliQ Hardware has **3 channels** like "**Retailers**", "**Direct**" and "**Distributors**" from which customers can buy various available AtliQ hardware products.



# ABOUT ATLIQ HARDWARE (DIVISIONS AND PRODUCTS)

## P & A

### Peripherals

Graphic Card

Internal HDD

MotherBoard

Processors

### Accessories

Batteries

Keyboard

Mouse

## PC

### Desktop

Business Laptop

Personal Laptop

### Notebook

Business Laptop

Gaming Laptop

Personal Laptop

## N & S

### Networking

WiFi extender

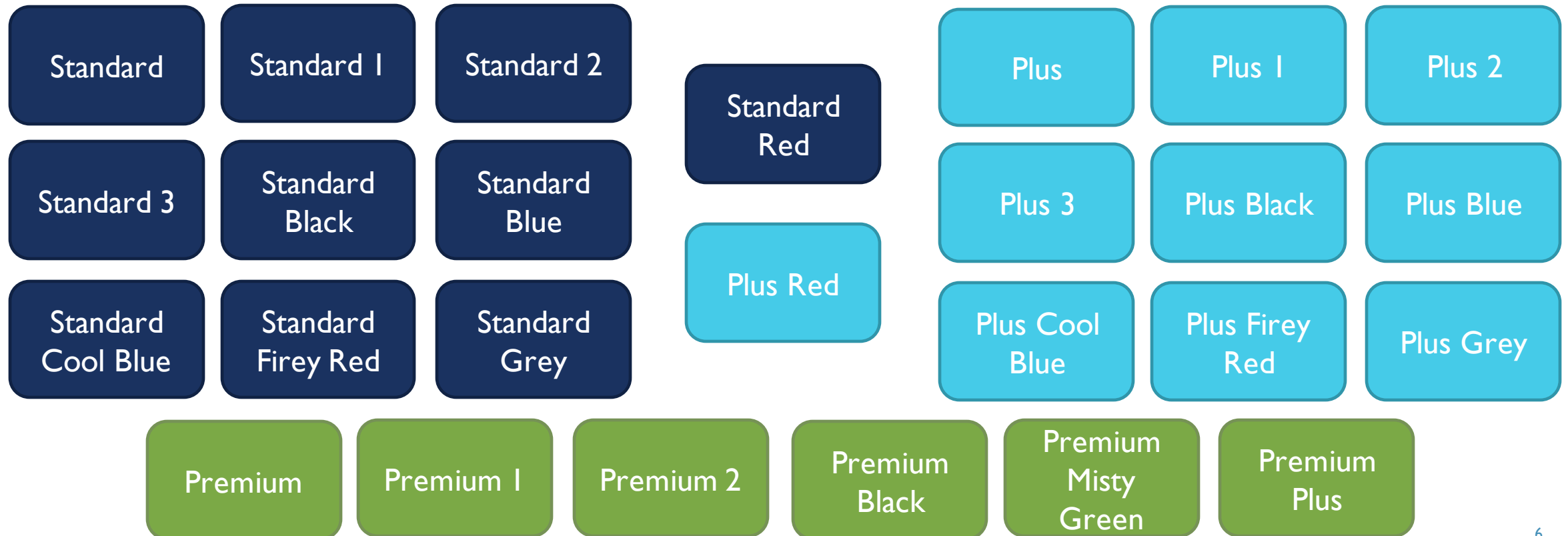
### Storage

External Solid State Drives

USB Flash Drives

# ABOUT ATLIQ HARDWARE (VARIANTS)

- A total of **26 Variants** are available among the different products.



# ABOUT CHALLENGE



**Problem:** The management in AtliQ hardware noticed that they do not get enough insights to make quick and smart data-informed decisions.



**Agenda:** AtliQ Hardware want to expand their data analytics team by adding several junior data analysts. Tony Sharma, their data analytics director wanted to hire someone who is good at both tech and soft skills.



**Decision:** Decided to conduct a SQL challenge which will help data analytics director understand both the skills.



**Task / Challenge given:** To run SQL queries to answer 10 Ad-hoc requests for which AtliQ Hardware needs business insights. For more information click on the [Link](#).

# ABOUT DATA TABLES

- 6 Tables (2 dimension tables and 4 fact tables):

Table name and Size	Description
dim_customer (209 rows, 7 columns)	Customer information
dim_product (397 rows, 6 columns)	Product information
fact_pre_invoice_deductions (418 rows, 3 columns)	Pre invoice deductions information for each customer
fact_gross_price (579 rows, 3 columns)	Gross price information for each product
fact_manufacturing_cost (579 rows, 3 columns)	Manufacturing cost information for each product
fact_sales_monthly (971631 rows, 5 columns)	Monthly sales information

<b>dim_customer</b>
customer_code INT
customer VARCHAR(150)
platform VARCHAR(45)
channel VARCHAR(45)
market VARCHAR(45)
sub_zone VARCHAR(45)
region VARCHAR(45)

<b>fact_pre_invoice_deductions</b>
customer_code INT
fiscal_year YEAR
pre_invoice_discount_pct DECIMAL(5,4)

<b>fact_manufacturing_cost</b>
product_code VARCHAR(45)
cost_year YEAR
manufacturing_cost DECIMAL(15,4)

<b>fact_sales_monthly</b>
date DATE
product_code VARCHAR(45)
customer_code INT
sold_quantity INT
fiscal_year YEAR

<b>fact_gross_price</b>
product_code VARCHAR(45)
fiscal_year YEAR
gross_price DECIMAL(15,4)

<b>dim_product</b>
product_code VARCHAR(45)
division VARCHAR(45)
segment VARCHAR(45)
category VARCHAR(45)
product VARCHAR(200)
variant VARCHAR(45)



# AD-HOC REQUESTS AND RESULTS

## REQUEST – I : LIST OF MARKETS

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

Markets_Atliq_Exc_APAC
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philiphines
South Korea

1



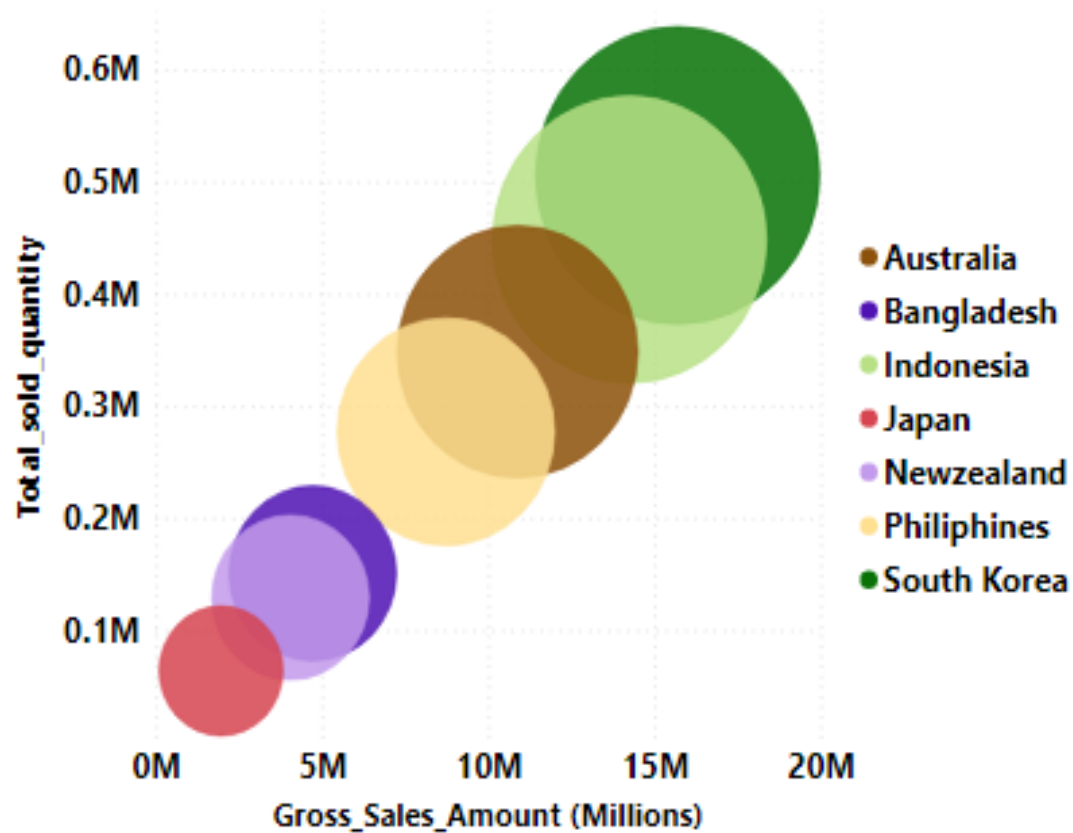
**Total Sold Quantity**

1.92 Million

**Gross Sales**

59.87 Million

# GRAPHICAL OUTPUTS AND INSIGHTS



- **AtliQ Exclusive** operates its business among **8** different **countries** in the **Asia pacific** region.
- After **India**, **South Korea** and **Indonesia** are on **2nd** and **3rd** position with gross sales of **15.7** millions and **14.25** millions, respectively.
- **Japan** is among the countries who has given **less** business to AtliQ Exclusive.
- For **AtliQ Exclusive** it looks like **gross sales** is having a **positive correlation** with **sold quantities**.
- Overall, AtliQ Exclusive is a customer that the management should look for future business.

# AD-HOC REQUESTS AND RESULTS

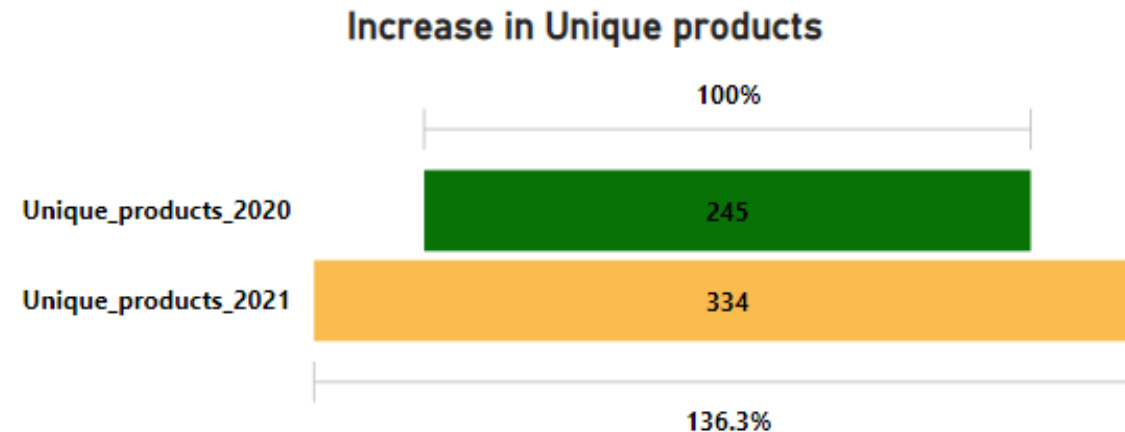
## REQUEST – 2 : INCREASED IN UNIQUE PRODUCTS

- 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

# GRAPHICAL OUTPUTS AND INSIGHTS



- The number of unique products in **fiscal year 2020** is **245** whereas in the next fiscal year it has increased to **334** products which shows a **significant increase** of **36.33 %**.
- Thus, in total **89 new products** were introduced into the consumer market for their customers.
- This shows that the company has **team of employees** who have **great knowledge** in terms of **product development** and **related technologies** that are in **demand**.

# AD-HOC REQUESTS AND RESULTS

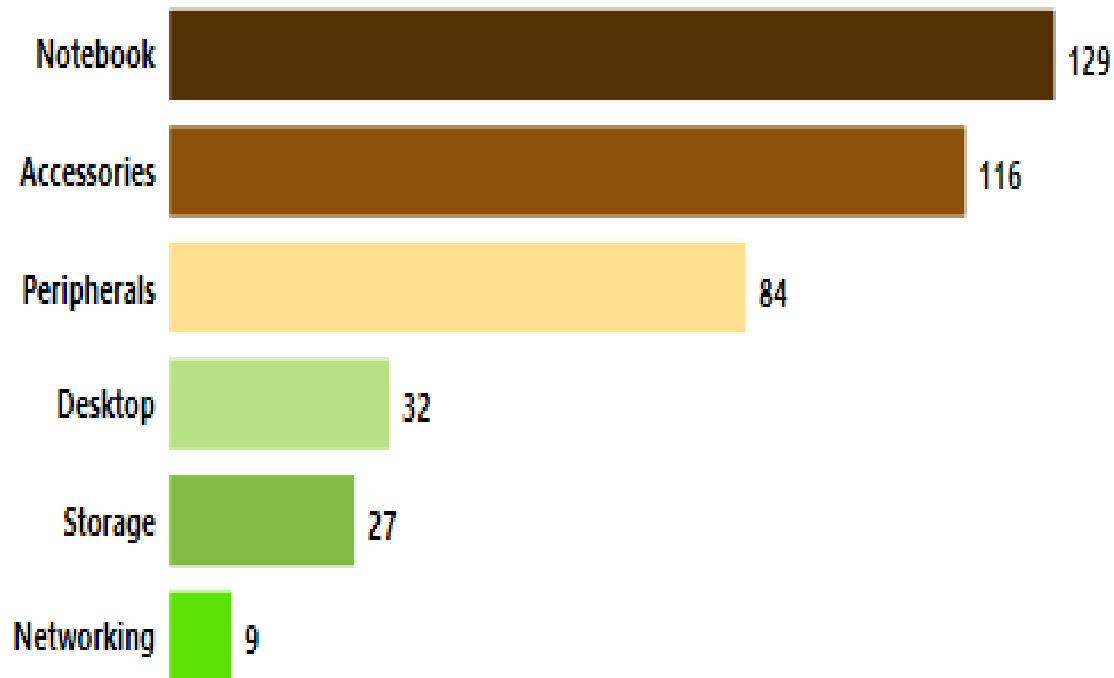
## REQUEST – 3 : UNIQUE PRODUCTS IN EACH SEGMENT

- 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

# GRAPHICAL OUTPUTS AND INSIGHTS

## Number of Unique Products (Segment wise)



- Among the **6 segments**, **Notebook** has the **highest** number of unique products which is around **129** while **Networking** has only **9** products which is the **lowest** among all.
- Following **Notebook** segment, **Accessories** and **Peripherals** have **116** and **84** unique products while **Desktop** and **Storage** segments consist of **32** and **27** unique products.
- **Suggestion:** The management needs to think in the **direction of expanding** the **lowest 3 segments** that would have **more product varieties** for the coming **fiscal year 2022**.

# AD-HOC REQUESTS AND RESULTS

## REQUEST – 4 : INCREASED IN UNIQUE PRODUCTS (SEGMENT-WISE)

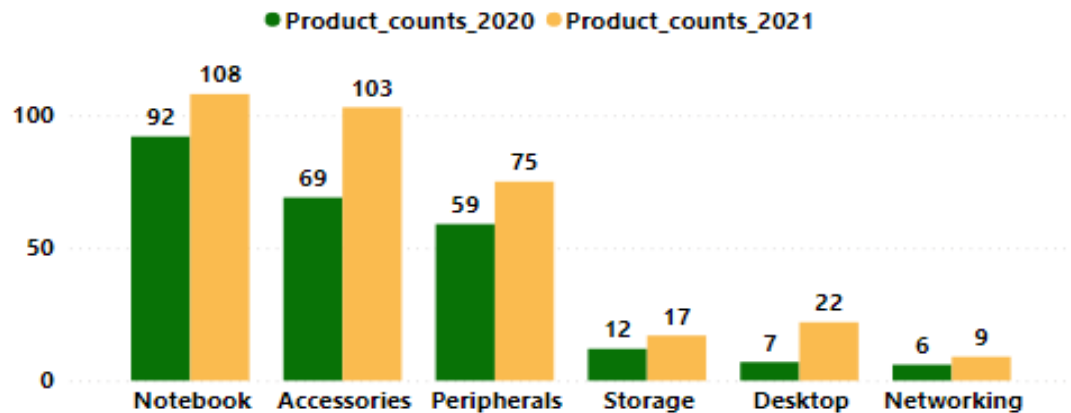
- Which segment had the most increase in unique products in 2021 vs 2020?
- The final output contains these fields:

Segment, product\_count\_2020, product\_count\_2021, difference

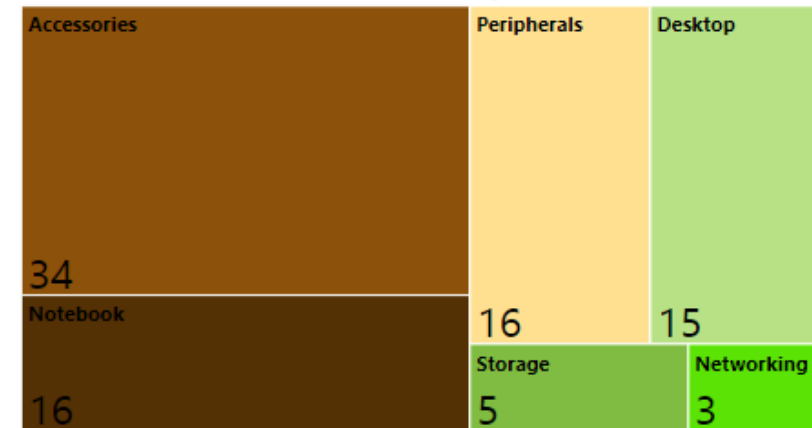
Segment	Product_counts_2020	Product_counts_2021	Diff
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

# GRAPHICAL OUTPUTS AND INSIGHTS

Product Counts in FY 2020 and 2021 (Segment wise)



Product Increase (Segment wise)



- Among all the segments, **Accessories** is **leading** with an increase of **34** products while the **least** number of increased occurred in **Networking**. There was a moderate increase of **16** products in both **Peripherals** and **Notebook**. Interestingly, **Desktop** segment had a **massive increase** of products from **7** to **22** which is almost **3 times** the number of products in **fiscal year 2020**.
- Thus, not only in **P & A division** but also in **PC division** there has been an **immense development of new products** over the year.



# AD-HOC REQUESTS AND RESULTS

## REQUEST – 5 : PRODUCTS WITH HIGHEST & LOWEST MANUFACTURING COST

- 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

# GRAPHICAL OUTPUTS AND INSIGHTS

Highest Manufacturing Cost

**Product Details:**

**Product Code:**

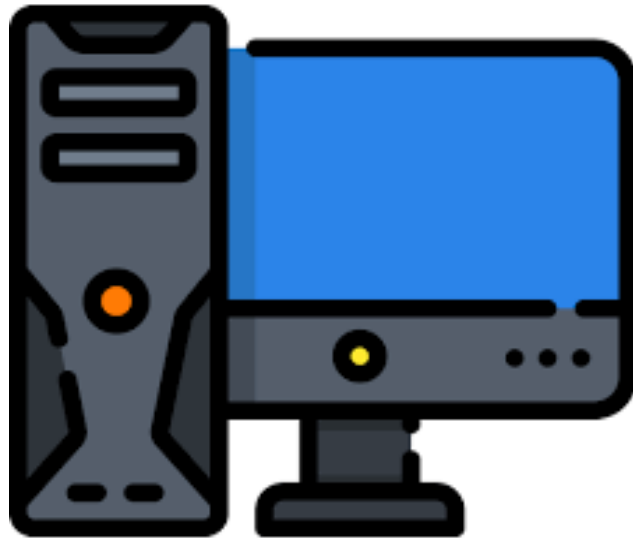
**A6120110206**

**Product Name:**

**AQ HOME Allin1 Gen 2**

**Segment:** Desktop

**Variant:** Plus 3



240.53 \$

Lowest Manufacturing Cost

**Product Details:**

**Product Code:**

**A2118150101**

**Product Name:**

**AQ Master wired x1 Ms**

**Segment:** Accessories

**Variant:** Standard 1



0.892 \$

## AD-HOC REQUESTS AND RESULTS

### REQUEST – 6 : TOP 5 CUSTOMERS RECEIVING HIGH DISCOUNTS

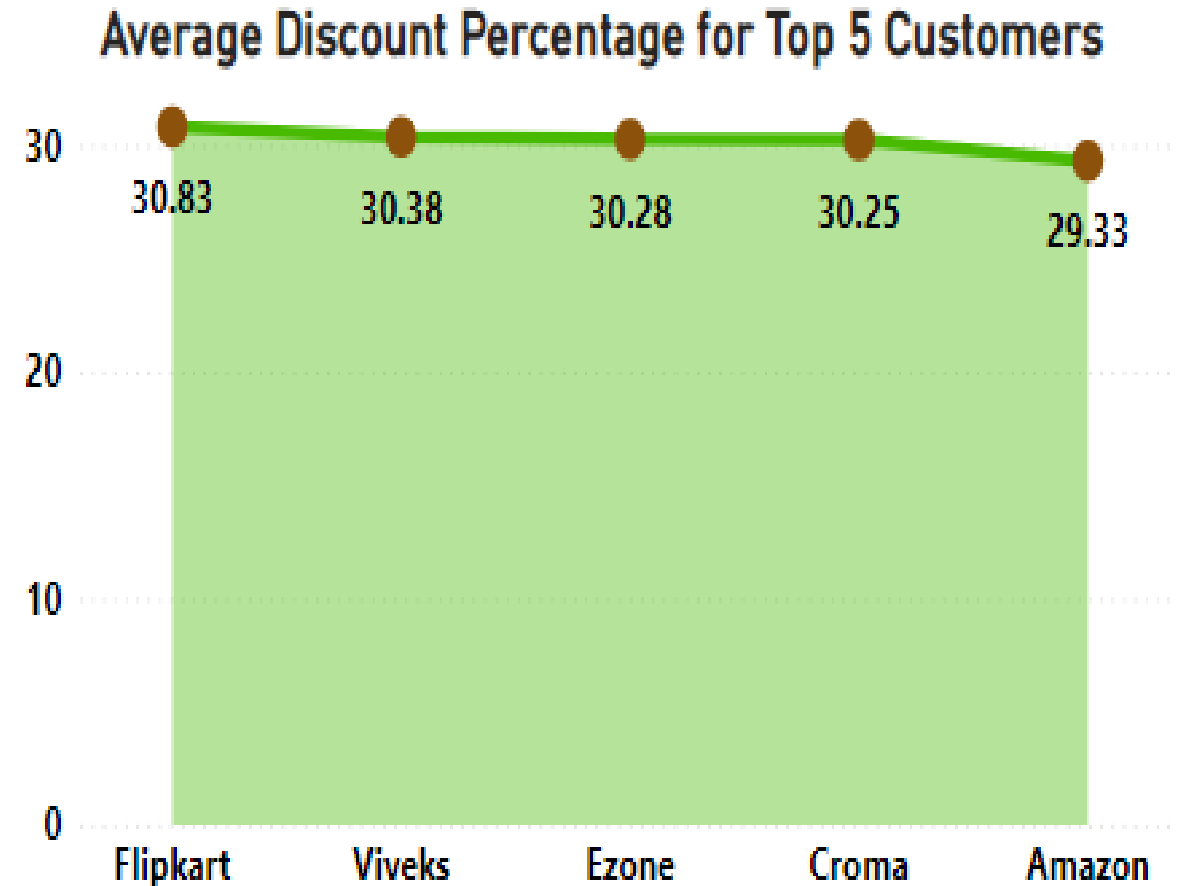
- Generate a report which contains the top 5 customers who received an average high pre\_invoice\_discount\_pct for the fiscal year 2021 and in the Indian market.
- The final output contains these fields:

customer\_code, customer, average\_discount\_percentage

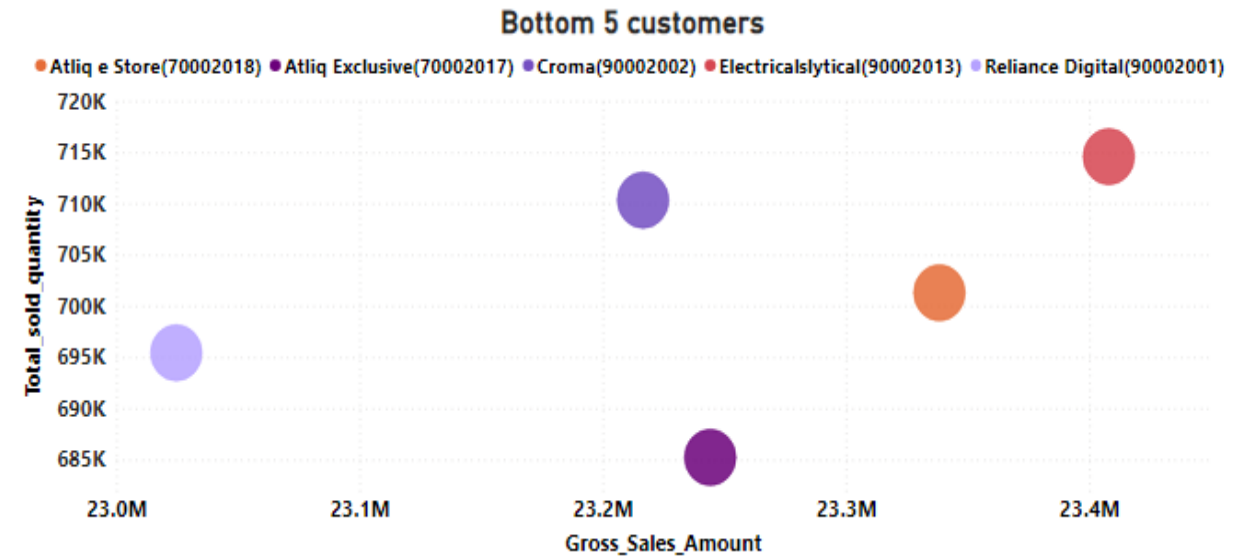
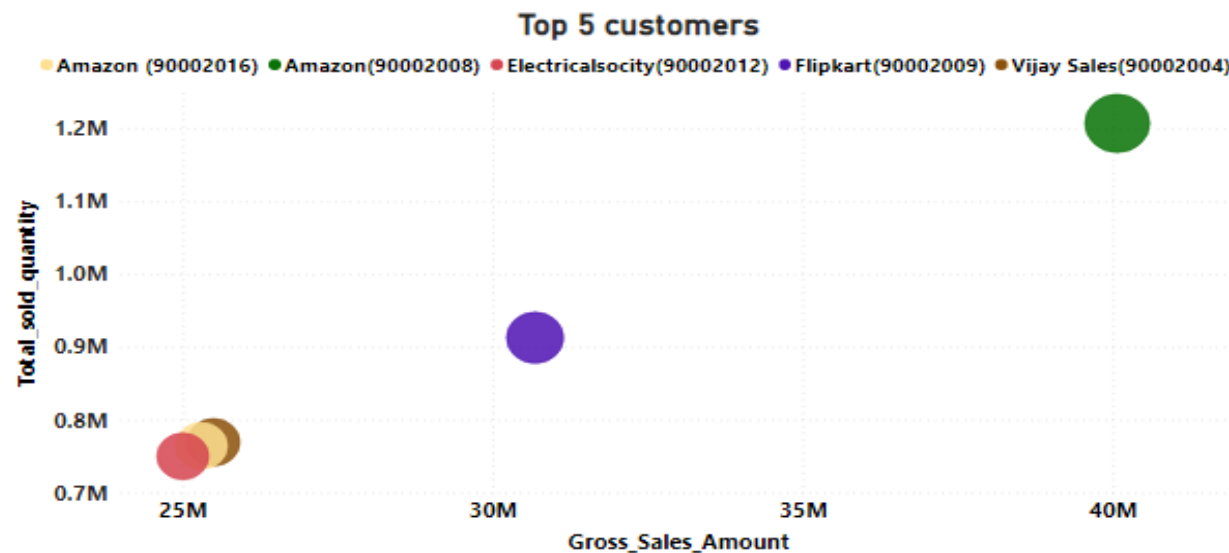
customer_code	customer	Avg_discount_percentage
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33

## GRAPHICAL OUTPUTS AND INSIGHTS

- Among the **74 customers**, there are **18 customers** in the **India Market**. The **top 5 customers** in India market of **AtliQ Hardware** which got **highest percentage of pre invoice discount** for the **fiscal year 2021** are **Flipkart, Viveks, Ezone, Croma** and **Amazon**.
- Even though the **average discount percentage** is almost **30%** among the 5 customers, **Flipkart** got a **maximum** average discount that was nearly **31%** while **Amazon** got an average discount that was around **29%**.



# GRAPHICAL OUTPUTS AND INSIGHTS



- **Amazon** through **Retailer** channel from **E-commerce** platform gave the **highest** gross sales amounting to more than 40 million by ordering 12 lakh quantities got a pre invoice discount of **22%** while **Flipkart** got the highest pre-invoice discount among all the customers which gave **10 million less gross sales than Amazon**.
- Other **3** customers got **28%, 29% and 20% discounts** that gave an **average of 25 million gross sales** to **AtliQ Hardware**.
- The **bottom 5 customers** on an **average** had gross sales of **23 millions** even though the total sold quantity varies.
- **Electricalslytical**, order **4,200 quantities** more than **Croma**, got **less pre invoice discount** that had a **difference of 7%**.
- **AtliQ Exclusive** that operates from **Direct** channel through **Brick & Motor** platform got the **least pre invoice discount** of just **7%** among the customers in Indian market.

CHALLENGE # 4: "PROVIDE INSIGHTS TO MANAGEMENT IN CONSUMER GOODS DOMAIN"  
PRESENTED BY YASH SULE

# AD-HOC REQUESTS AND RESULTS

## REQUEST – 7 : MONTHLY REPORT OF GROSS SALES AMOUNT

- Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month.
- The final report contains these columns: Month,Year, Gross sales Amount

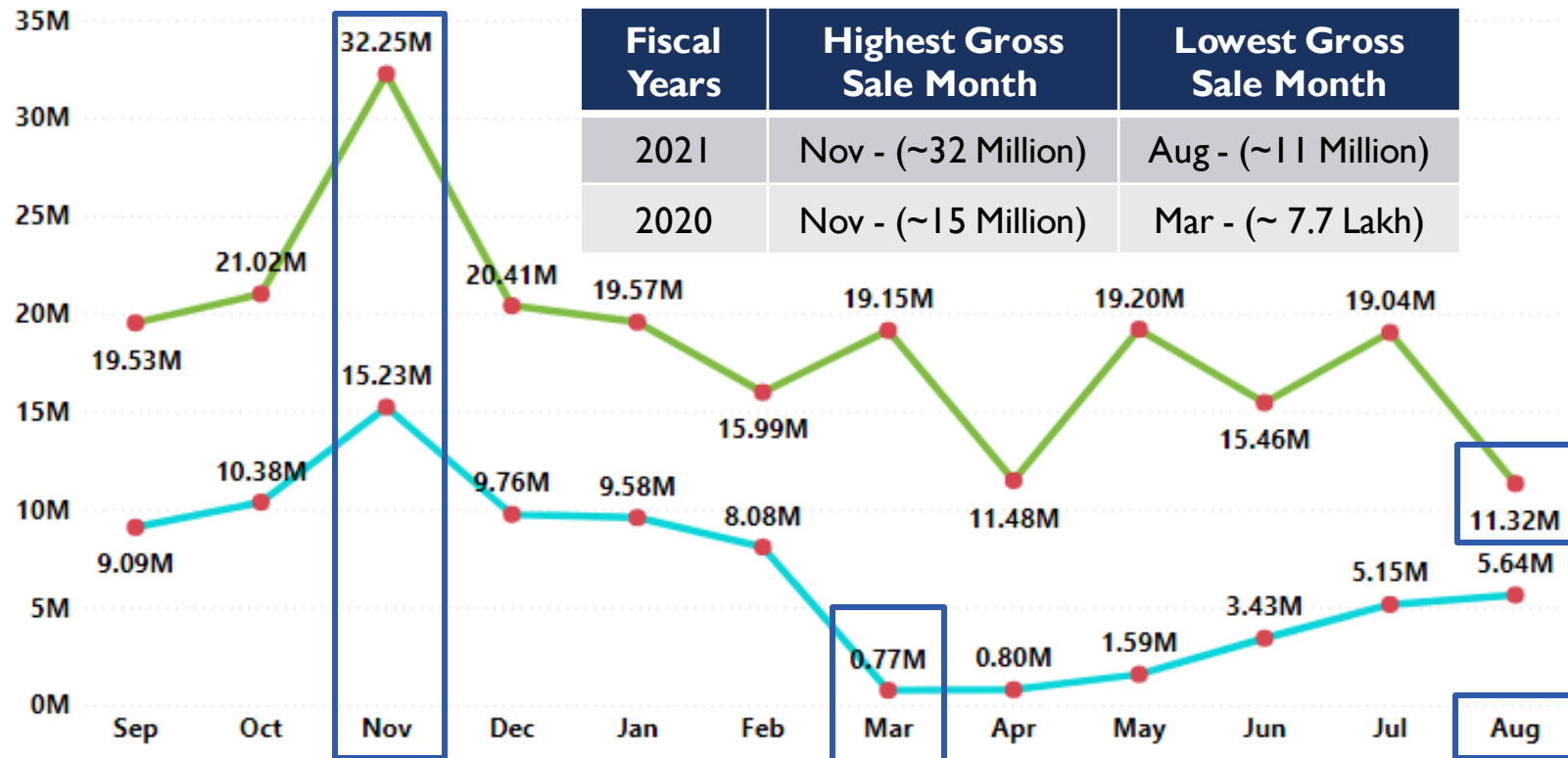
Month	Year	Gross_Sales_Amount
9	2020	9092670.34
10	2020	10378637.60
11	2020	15231894.97
12	2020	9755795.06
1	2020	9584951.94
2	2020	8083995.55
3	2020	766976.45
4	2020	800071.95
5	2020	1586964.48
6	2020	3429736.57
7	2020	5151815.40
8	2020	5638281.83

9	2021	19530271.30
10	2021	21016218.21
11	2021	32247289.79
12	2021	20409063.18
1	2021	19570701.71
2	2021	15986603.89
3	2021	19149624.92
4	2021	11483530.30
5	2021	19204309.41
6	2021	15457579.66
7	2021	19044968.82
8	2021	11324548.34

# GRAPHICAL OUTPUTS AND INSIGHTS

Monthly Gross Sales Amount for Fiscal years

Year ● 2020 ● 2021



- Overall, **November** outperform from other months in **both** the **fiscal years**.
- Due to **pandemic** in **FY 2020**, the **sales** of **March** month were the **lowest** among all of them.
- Even after an **epidemic** in **FY 2020**, **AtliQ Exclusive** showed a **significant growth** in the **successive months** that **sum** up to almost **more than 16 millions** with **highest** in month of **August** that was around **5.64 millions**.
- It shows the **products** had **good potential** in terms of **quality** and were quite in **demand** even after **COVID - 19** due to the **adaptation of work from home culture**.

# AD-HOC REQUESTS AND RESULTS

## REQUEST – 8 :TOTAL SOLD QUANTITY (QUARTER-WISE)

- In which quarter of 2020, got the maximum total\_sold\_quantity?
- The final output contains these fields sorted by the total\_sold\_quantity:

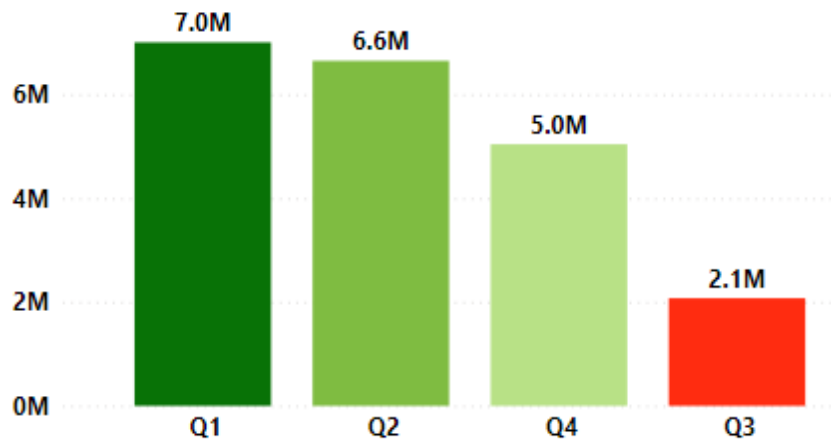
Quarter,total\_sold\_quantity

Quarter	Total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087



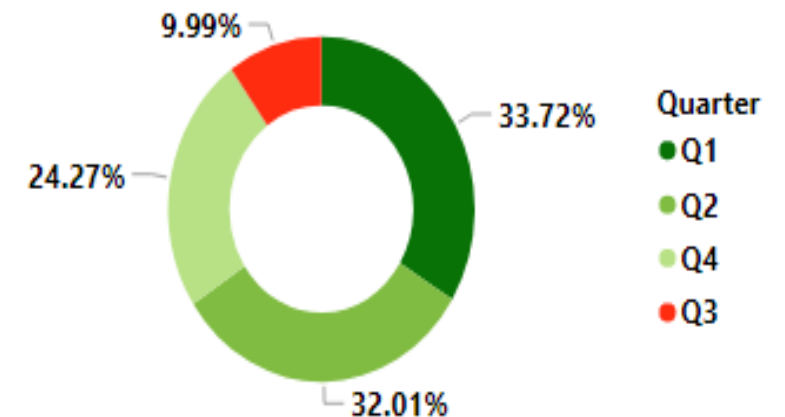
# GRAPHICAL OUTPUTS AND INSIGHTS

Total Sold Quantity (Quarter wise)



Quarter	Month
Q1	Sep, Oct, Nov
Q2	Dec, Jan, Feb
Q3	Mar, Apr, May
Q4	Jun, Jul, Aug

Total Sold Quantity (Quarter wise %)



- In **FY 2020**, out of the **4 quarters**, company achieved **highest sold quantities** in **Q1** that was around **7 million** while **Q3** recorded the **least sold quantities** which was around **2.1 million**. But despite of this the company **sold 5 million products** in **Q4**.
- Due to COVID – 19 situation**, work from home culture was adopted by many companies and online teaching by schools. Thus, as the demand of hardware products increased the sold quantities increased significantly in **Q4**.

Quarter	Gross Sales
Q1	180.54 Million
Q2	172.88 Million
Q3	52.42 Million
Q4	130.1 Million

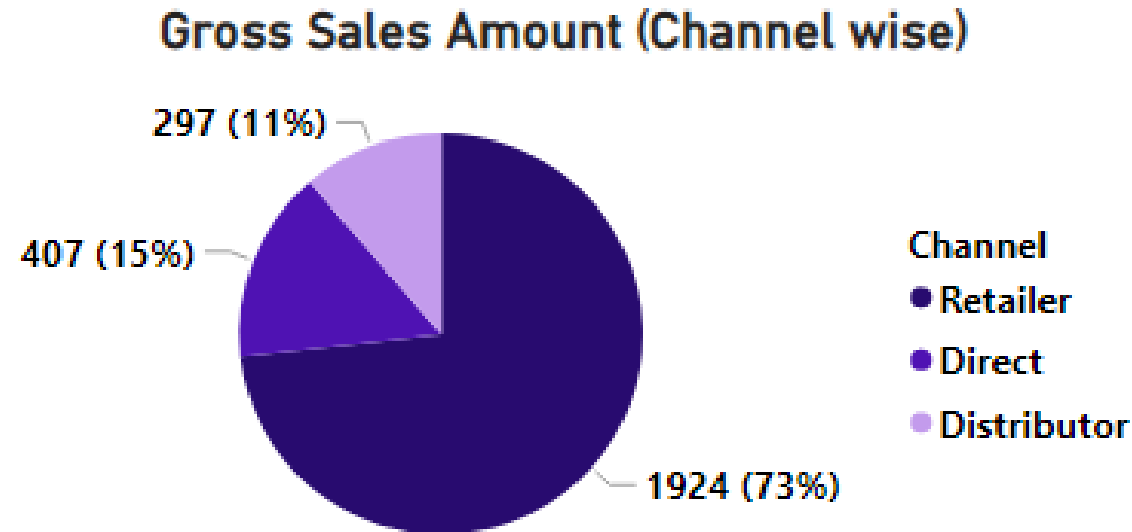
# AD-HOC REQUESTS AND RESULTS

## REQUEST – 9 : CHANNEL WITH HIGHEST GROSS SALES

- 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_Amount_Mln	Percentage
Retailer	1924.17	73.216922
Direct	406.69	15.475031
Distributor	297.18	11.308047

## GRAPHICAL OUTPUTS AND INSIGHTS



- For the **fiscal year 2021**, the **maximum gross sales** was given by **Retailer** channel which was as high as **1924 million** that contributes almost **73%** of the **total gross sales**.
- Following **Retailer** channel, **Direct** channel had a gross sales of **407 million** and the **least** gross sales channel was **Distributor** that gave a business of **11%** from the **total gross sales** to the company.

# AD-HOC REQUESTS AND RESULTS

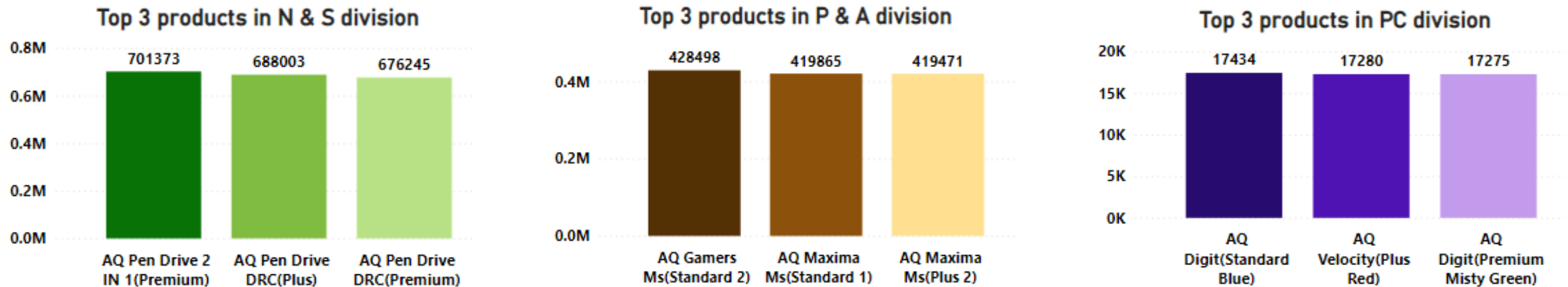
## REQUEST – 10 : TOP 3 PRODUCTS IN EACH DIVISION

- 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

# GRAPHICAL OUTPUTS AND INSIGHTS



- For **FY 2021**, according to **total sold quantities**, the **top 3 products in each division** are as follows:
- **N & S – AQ Pen Drive 2 in I: A Premium variant USB flash drives** belonging to **Storage** segment with more than **7 lakh** sold.
- **P & A – AQ Gamers Ms: A Standard variant mouse** belonging to **Accessories** segment with more than **4 lakh** sold.
- **PC - AQ Digit: A Standard Blue variant personal laptop** belonging to **Notebook** segment with more than **17,000** sold.



# THANK YOU!



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