AtliQ Hardware

Consumer goods

Ad_Hoc Insights

Project Objectives

- **AtliQ Hardwares** (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too.
- However, the management noticed that they do not get enough insights make quick and smart data-informed decisions.
- They 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.
- To address this need, Tony Sharma decided to conduct a SQL challenge involving 10 specific ad-hoc requests. This will help evaluate candidates' technical proficiency and problem-solving abilities.

About AtliQ Hardware

Atliq Hardwares is a hardware producers in India and well expanded in other countries too.

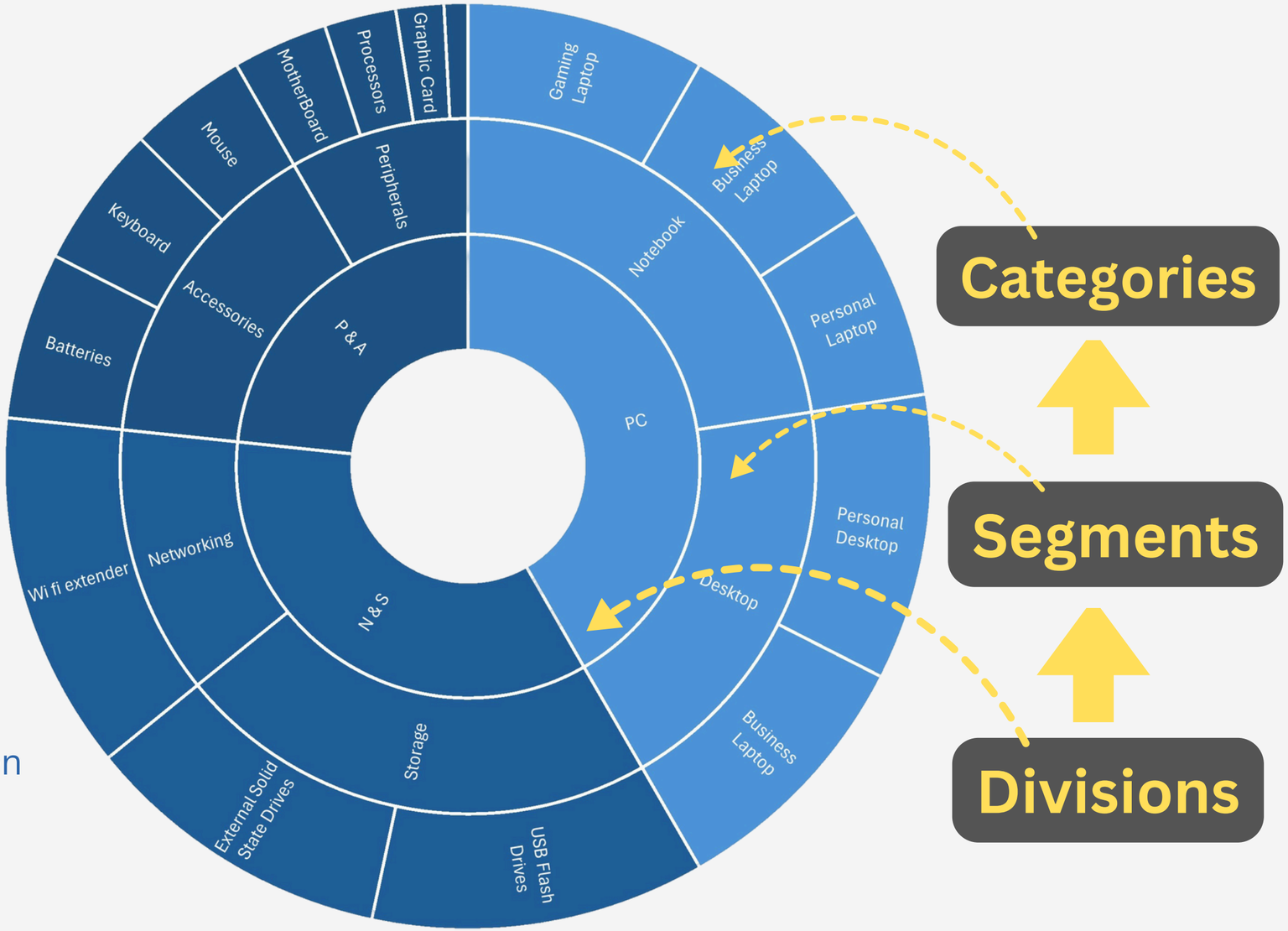
Fiscal Year

2020 - 2021

Sep 2019 - Aug 2021

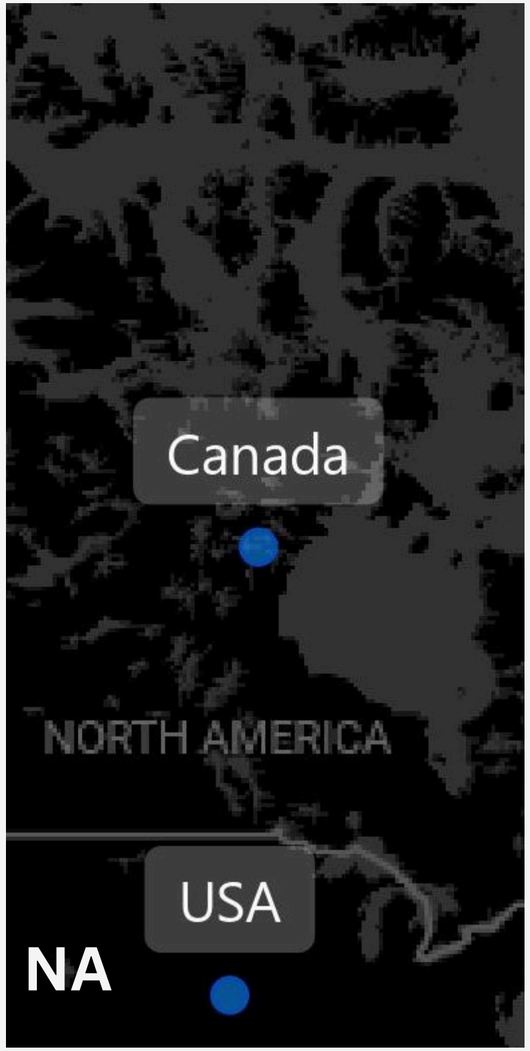
AtliQ Hardware's fiscal year commences on September 1 and concludes on August 31, aligning with an annual cycle from September through the subsequent August.

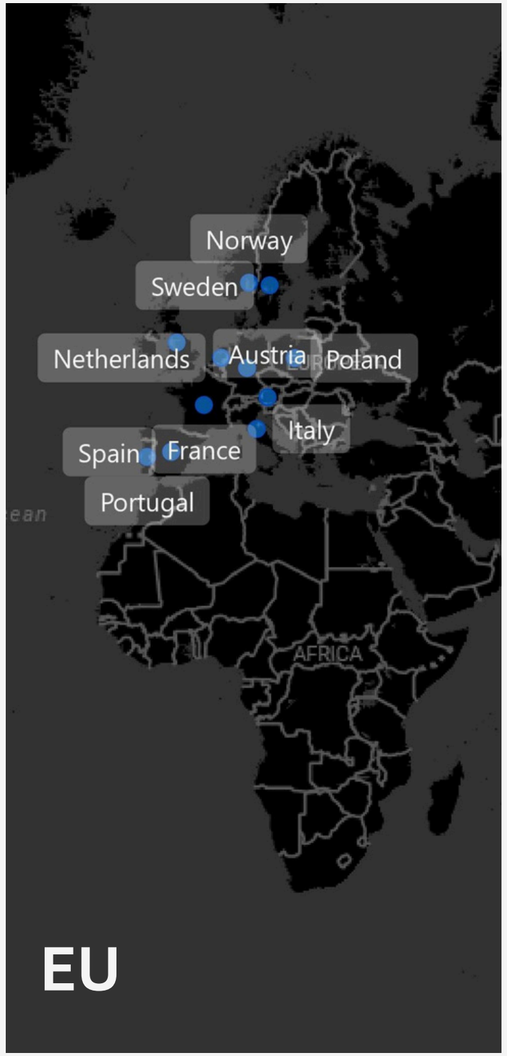
The company's product portfolio is organized into three divisions, six segments, and fourteen categories.

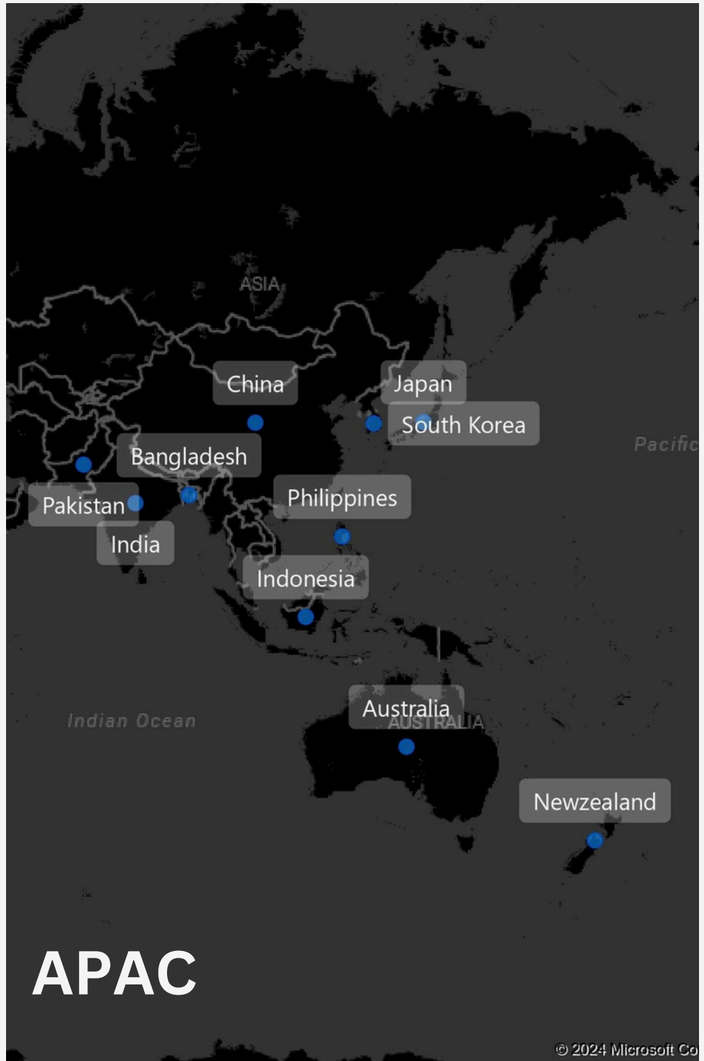


Regions & Markets

AtliQ Hardwares operates with a diverse customer base distributed across four key regions: Asia-Pacific (APAC), Latin America (LATAM), Europe (EU), and North America (NA). Their clientele includes customers from a total of 27 countries.







Ad_Hoc requets

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

codebasics.io

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

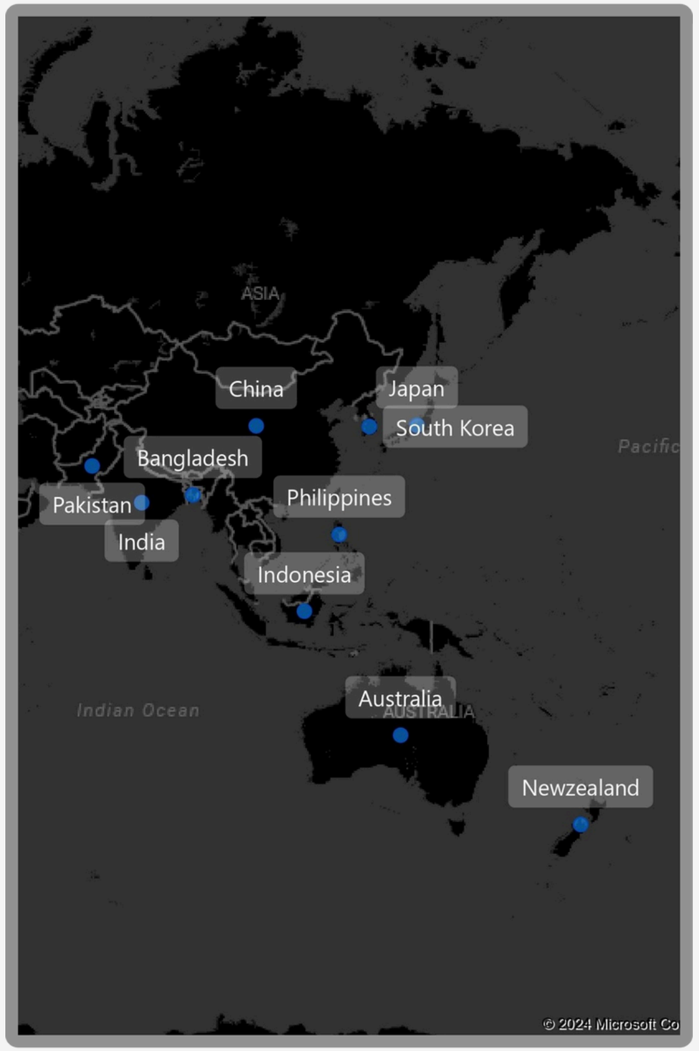
10 Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021? The final output contains these fields,
   division
   product_code
   product
   total_sold_quantity
   rank_order

Request 1

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

MYSQL output

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

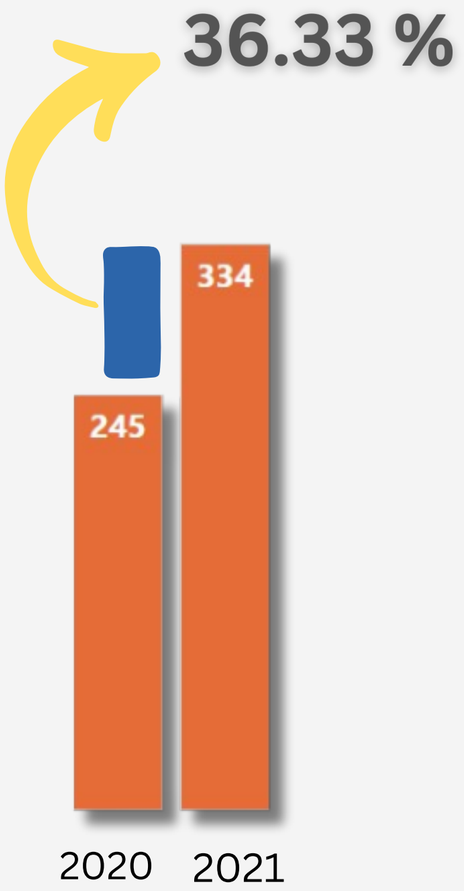


Request 2

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

MYSQL output

	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33



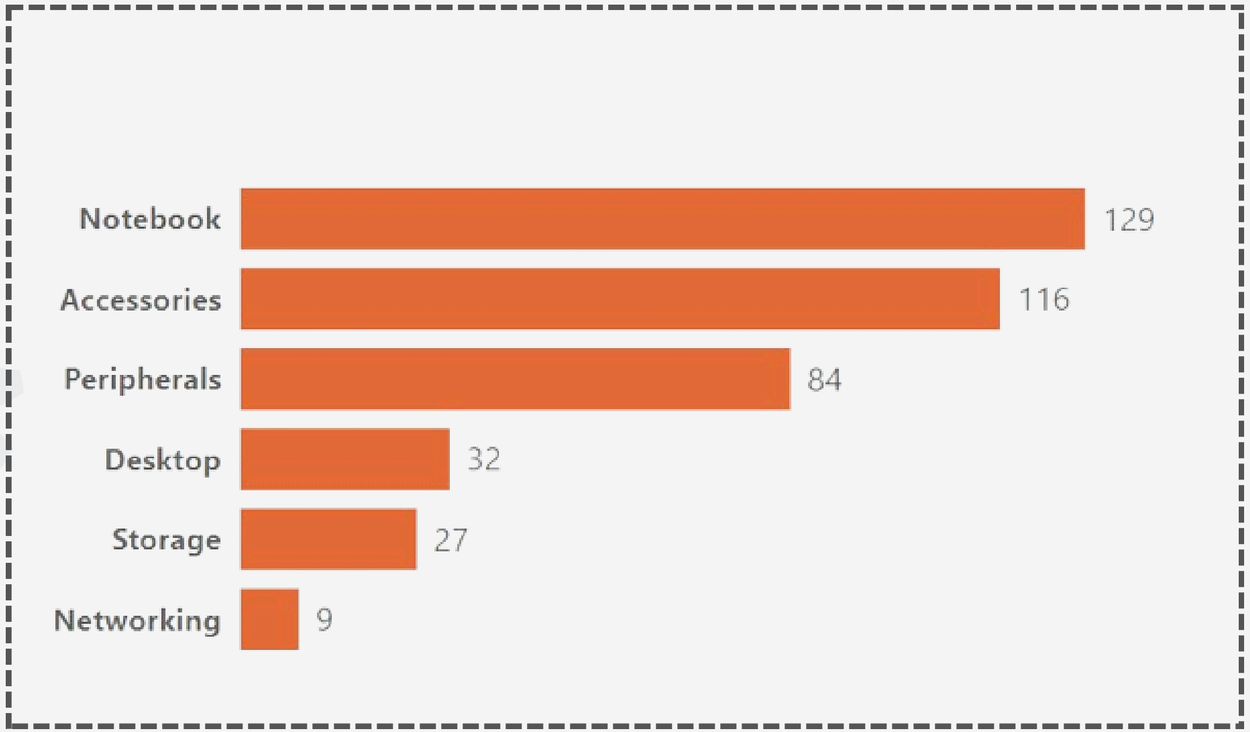
Production growth surged by **36.33%** from 2020 to 2021, marking a substantial improvement.

Request 3

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

MYSQL output

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



Insight

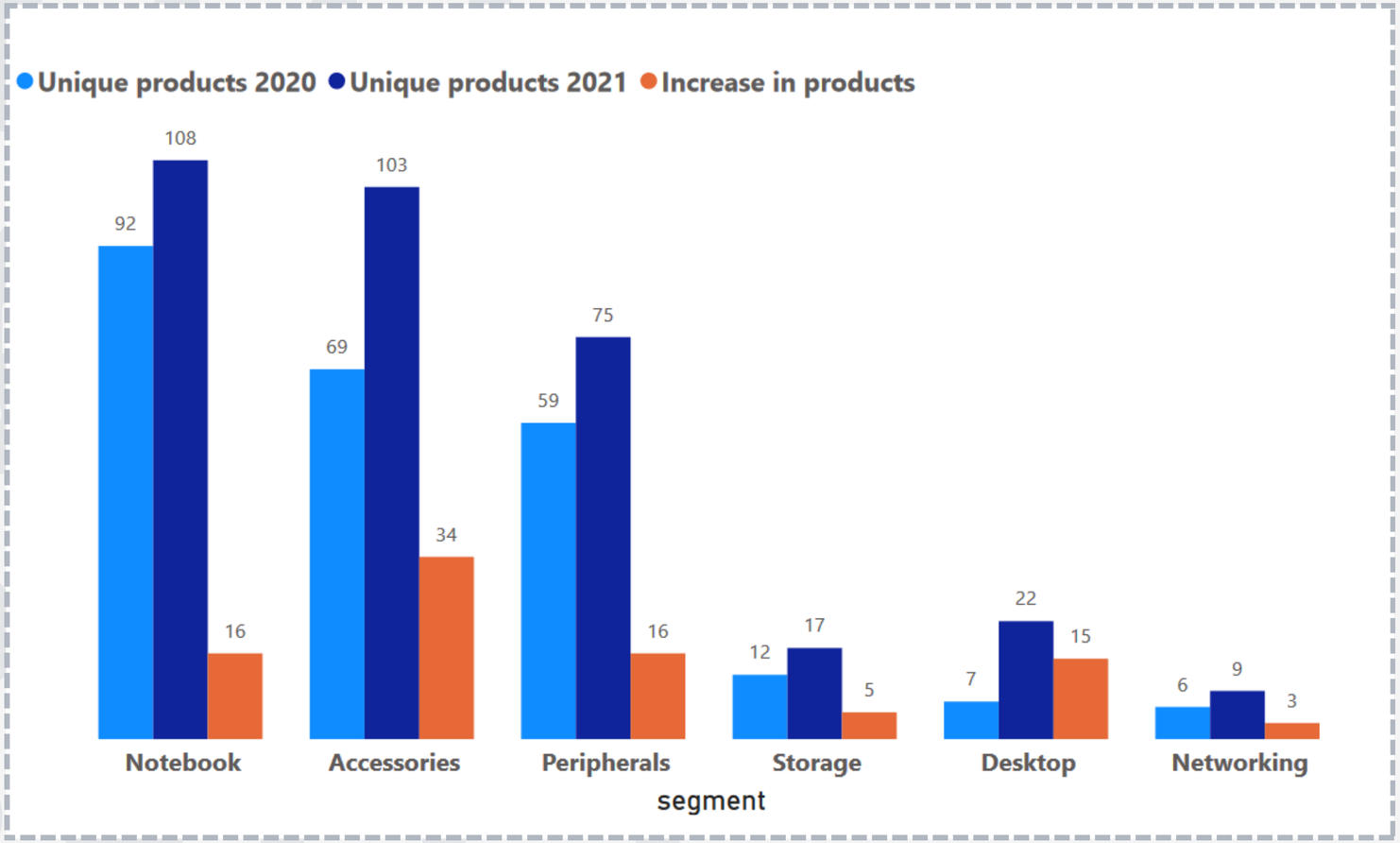
Notebook accessories, peripherals, and desktop storage are leading in manufacturing, but the networking segment lags with the fewest unique products.

Request 4

Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

MYSQL output

	segment	unique_product_2020	unique_product_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



Insight

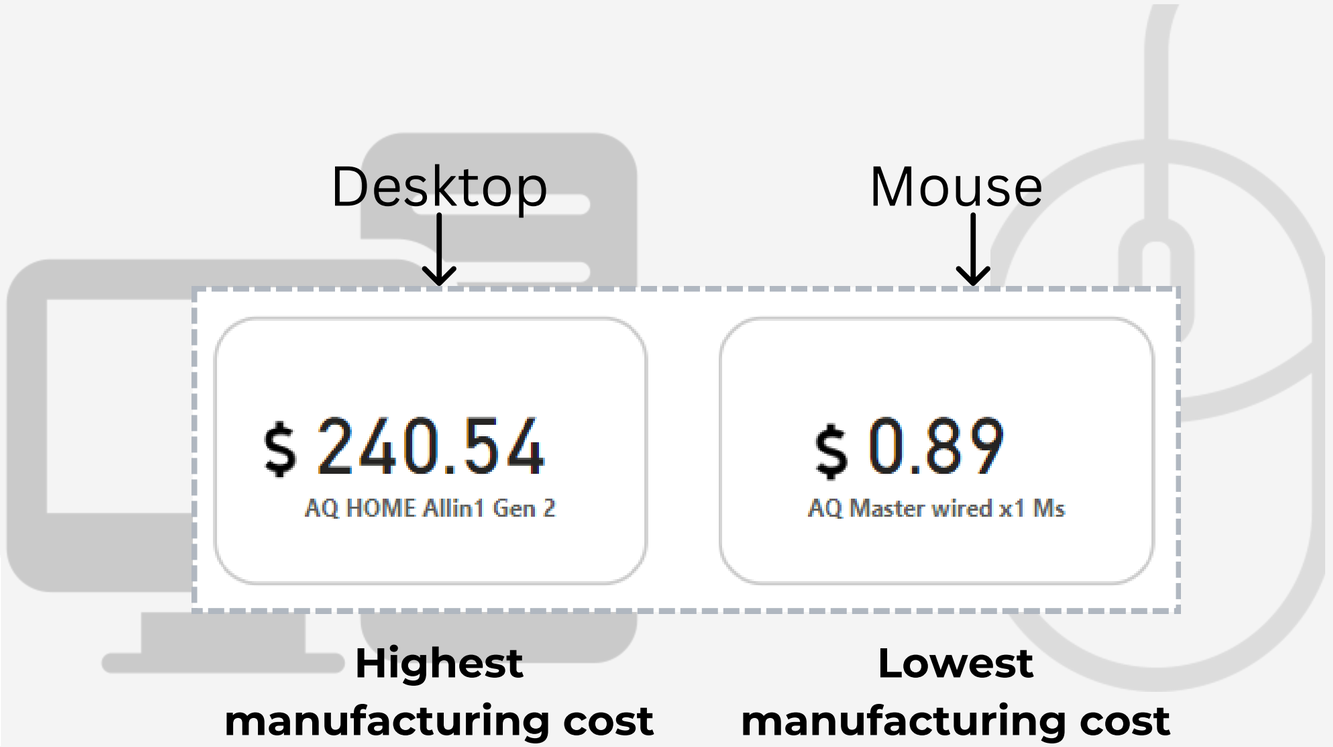
The **accessories** segment saw the greatest increase in unique products from **2020 to 2021**, while the **storage** and **networking** segments experienced the smallest growth in unique products during the same period.

Request 5

Get the products that have the highest and lowest manufacturing costs.

MYSQL output

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



Insight

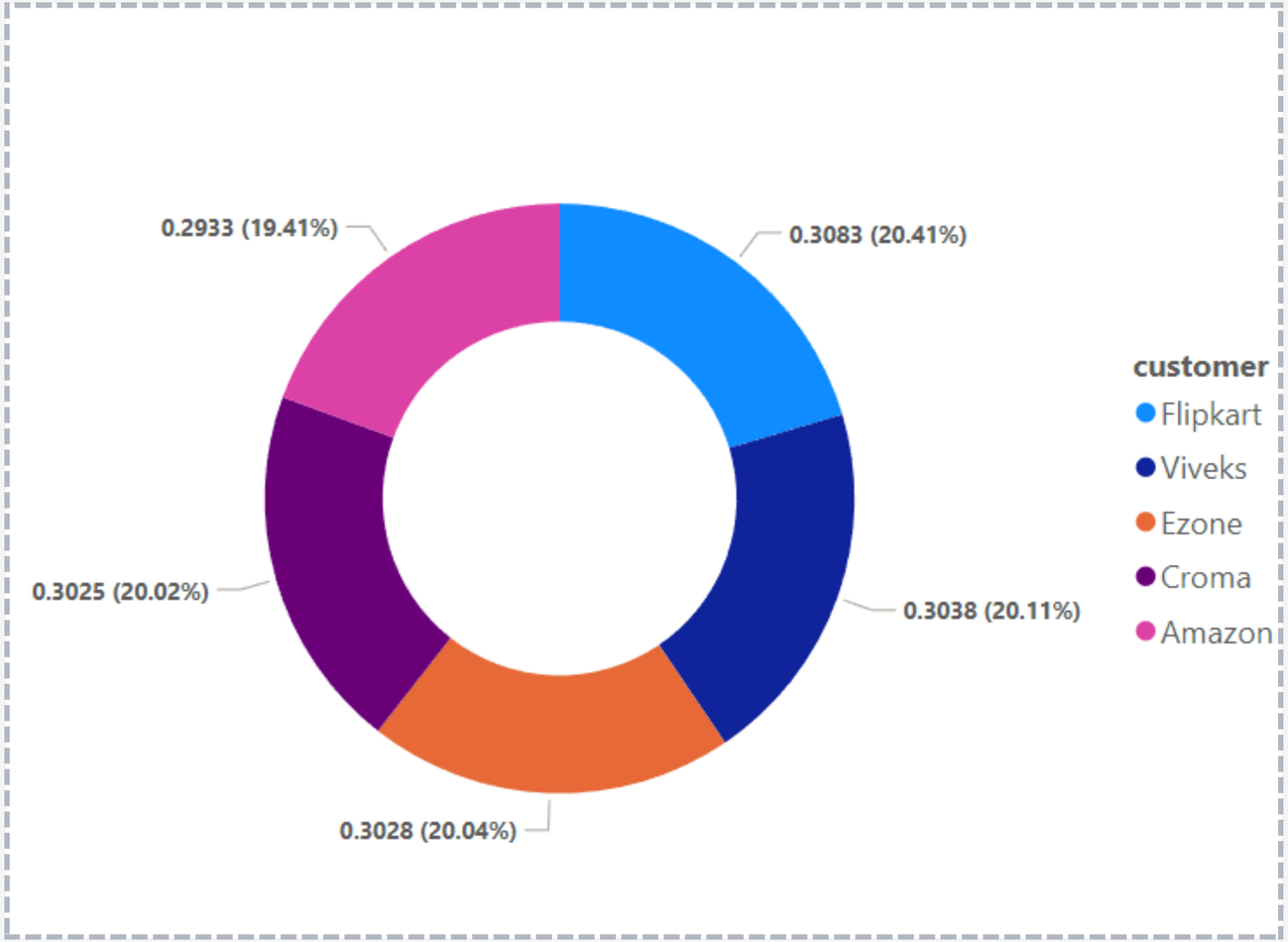
AQ HOME ALLIN 1 Gen 2 has the highest manufacturing cost for fiscal years 2020 and 2021, whereas **AQ MASTER Wired X1 MS** has the lowest manufacturing cost for both years.

Request 6

Generate a report which contains the top 5 customers who received an average high pre invoice discount percentage for the fiscal year 2021 and in the Indian market.

MYSQL output

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



Flipkart, **Viveks**, **Ezone**, **Croma** and **Amazon** are the top 5 customers who recevied highest average discount percentage in fiscal year 2021 in the Indian Market

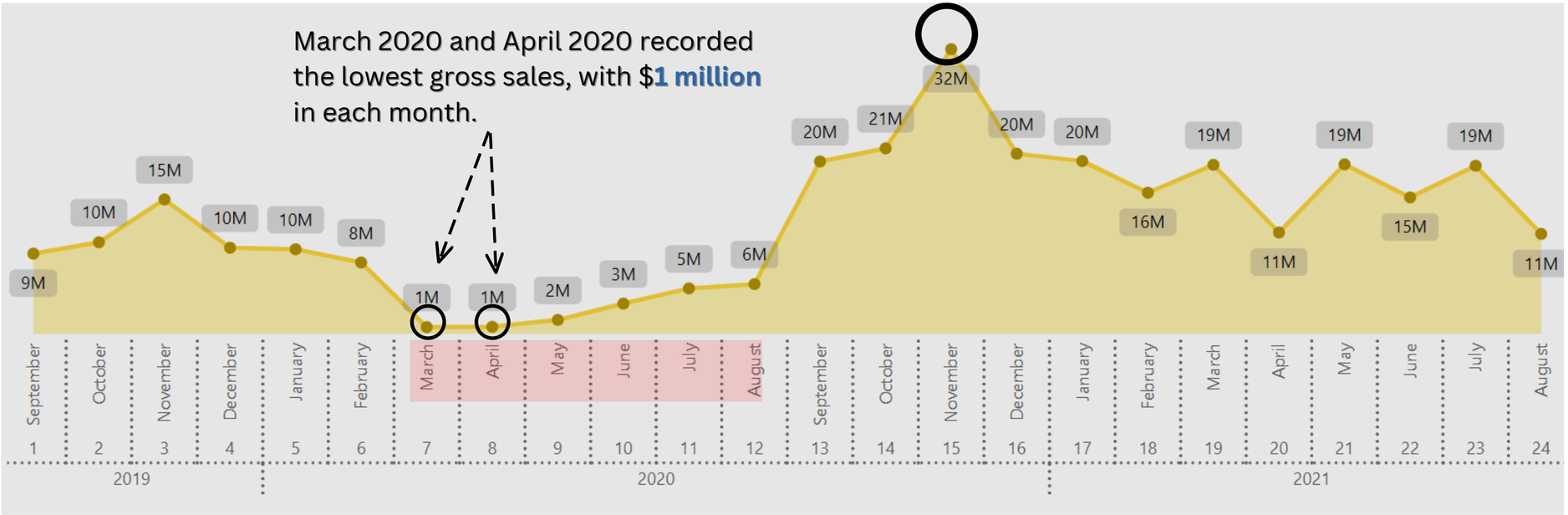
Request 7

Get the complete report of the Gross sales amount for the customer **Atliq Exclusive** for each month.

MYSQL output

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

Maximum gross sales achieved in November $**32 million**.



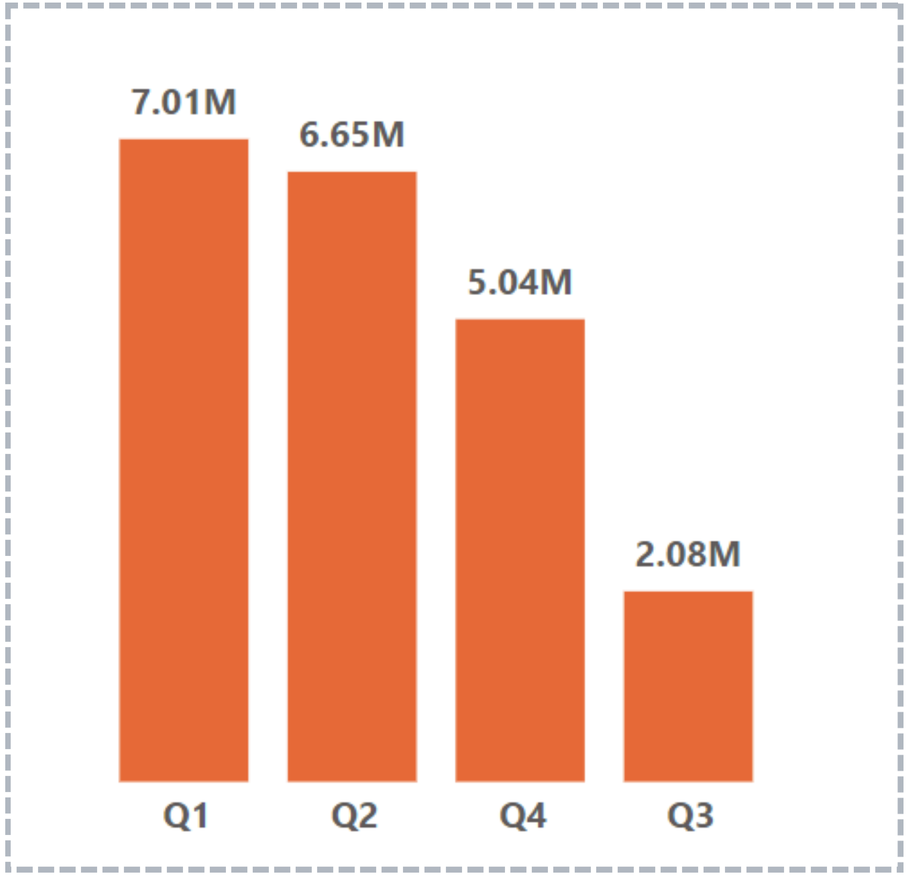
Atliq Exclusive faced a substantial reduction in gross sales from **March 2020 to August2020.**

Request 8

In which quarter of 2020, got the maximum total_sold_quantity?

MYSQL output

	Quarter	total_sold_quantity
▶	Q1	7005619
	Q2	6649642
	Q4	5042541
	Q3	2075087



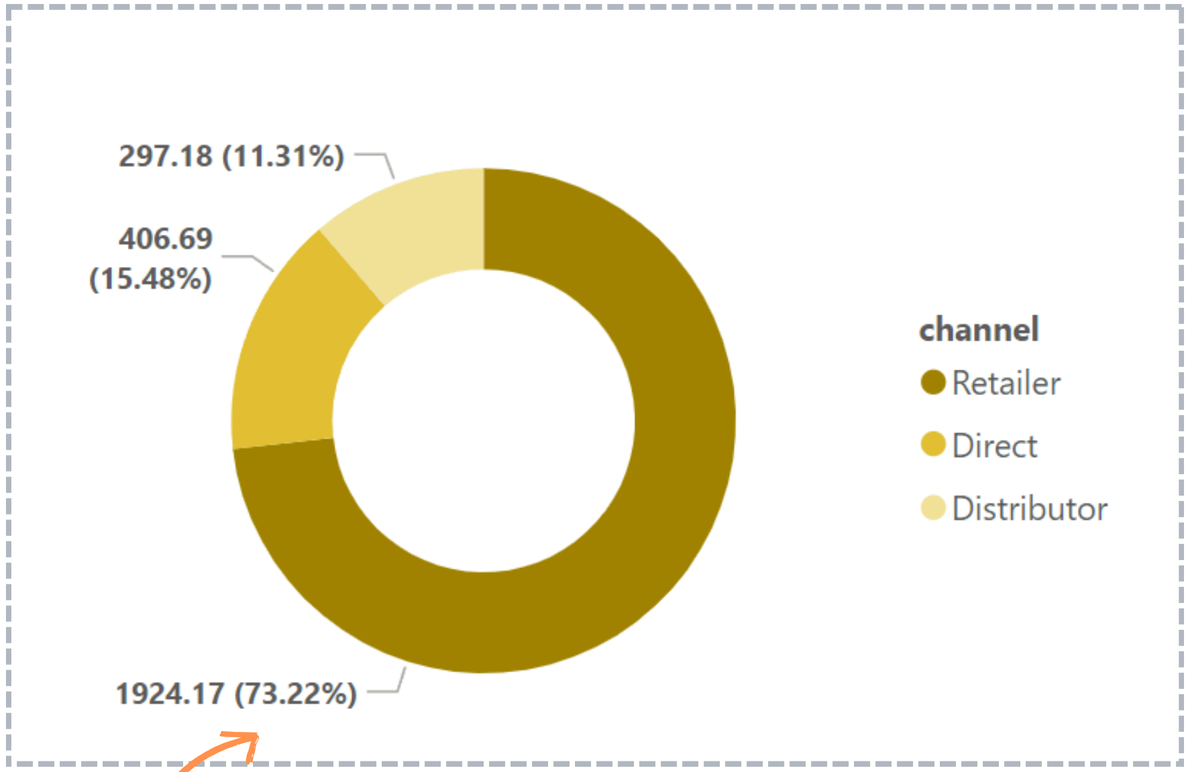
Achieved the highest sold quantity in **Quarter 1 ($ 7.01M)** of 2020.

Request 9

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

MYSQL output

	channel	gross_sales_mln	percentage
▶	Retailer	1924.17	73.22
	Direct	406.69	15.48
	Distributor	297.18	11.31



Retailers contributed the most to gross sales in fiscal year 2021, accounting for **73.22% ($ 1924.17 M)**.

Request 10

Get the Top 3 products in each division that have a high total sold quantity in the fiscal year 2021?

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

Divisions	Total sold quantity	Rank
N & S		
AQ Pen Drive 2 IN 1 (Premium)	701.37K	1
AQ Pen Drive DRC (Plus)	688.00K	2
AQ Pen Drive DRC (Premium)	676.25K	3
P & A		
AQ Gamers Ms (Standard 2)	428.50K	1
AQ Maxima Ms (Standard 1)	419.87K	2
AQ Maxima Ms (Plus 2)	419.47K	3
PC		
AQ Digit (Standard Blue)	17.43K	1
AQ Velocity (Plus Red)	17.28K	2
AQ Digit (Premium Misty Green)	17.28K	3

The total sold quantity of the top 3 products is **2065.62K** for **N&S**, **1267.83K** for **P&A**, and **51.99K** for **PC**. These top 3 products from each division account for **6.74%** of the total sold quantity in **fiscal year 2021**.

THANK YOU