



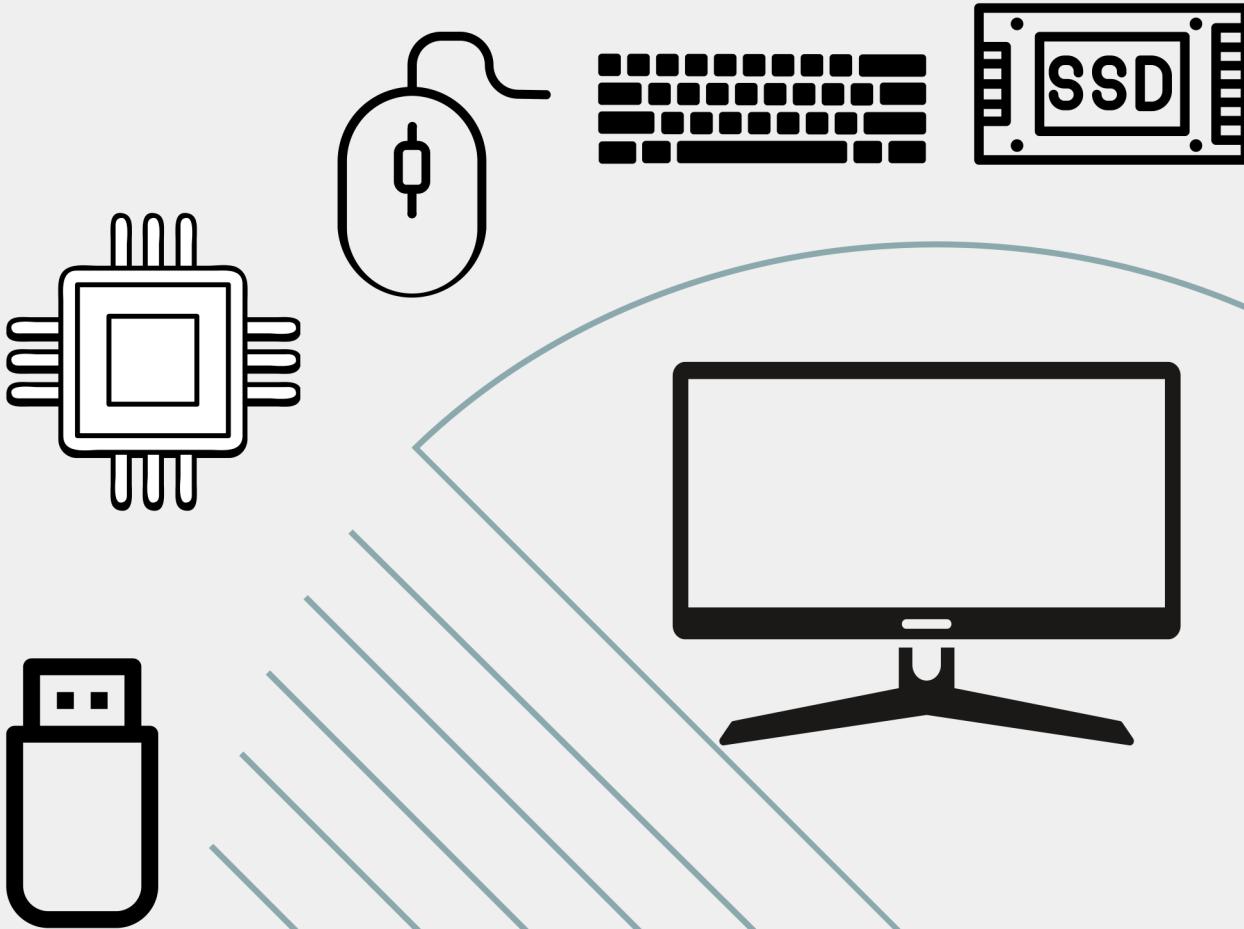
Welcome, everyone!

Today, we're diving into the
world of Ad-hoc Insights



AD_HOC INSIGHTS

Consumer Goods





OBJECTIVES

- AtliqHardware (fictitious corporation) is one of the major computer hardware manufacturers in India, with a strong presence in other nations.
- Nevertheless, the management did note that they do not have sufficient insights to make prompt, wise, and data-informed judgments.
- The company seeks insights for 10 ad hoc requests.

Company Details

FISCAL YEAR

SEPTEMBER 2019 - AUGUST 2020

FY 2020

SEPTEMBER 2020 - AUGUST 2021

FY 2021

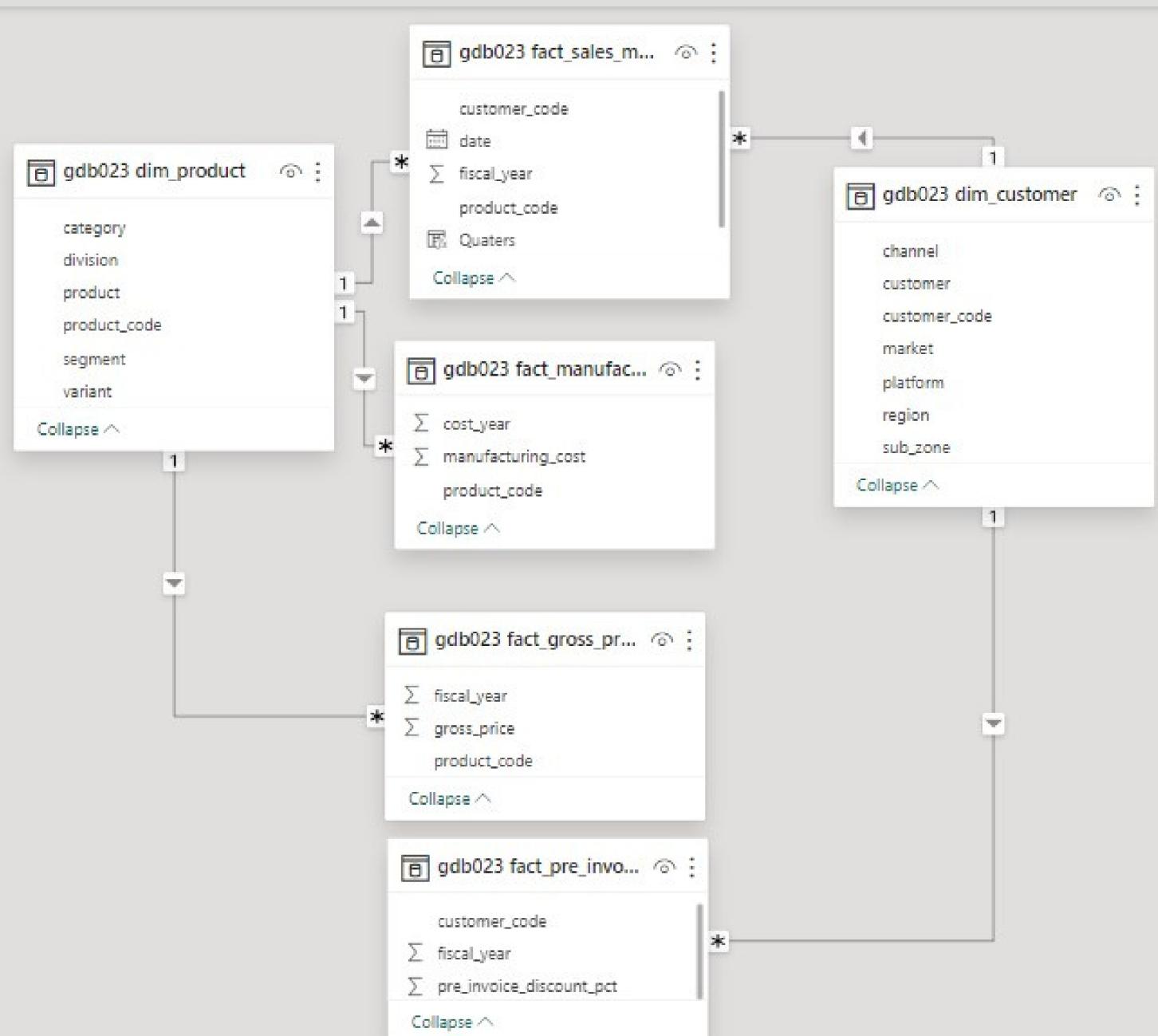


Outer Circle:
Category

Mid Circle:
Segment

Inner Circle:
Division

Data, Requests, and Tools



Codebasics SQL Challenge

Requests:

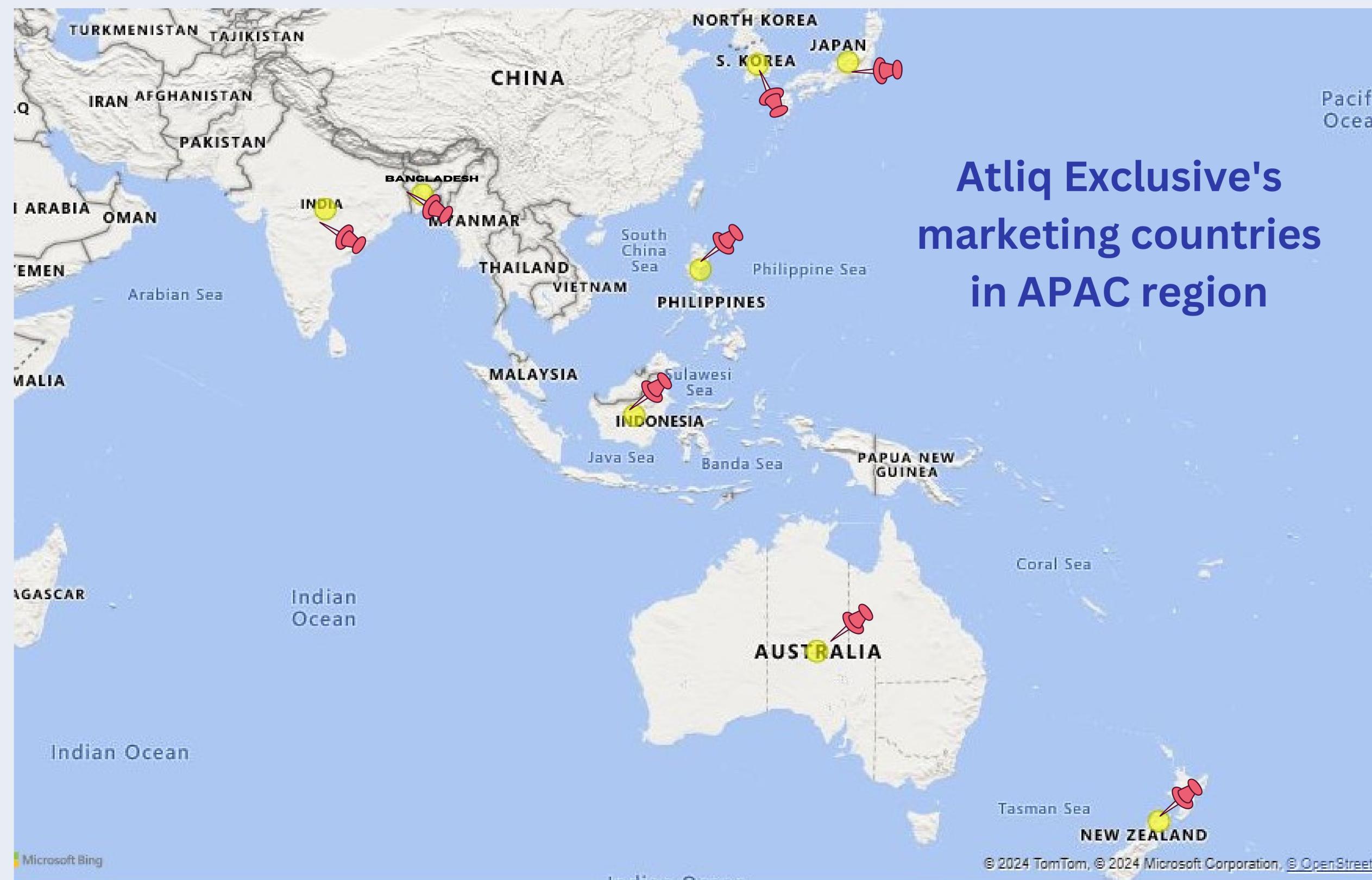
- Provide the list of markets in which customer "Atiq Exclusive" operates its business in the APAC region.
- What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,
unique_products_2020
unique_products_2021
percentage_chg
- Provide a report with all 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
- 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
- Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,
product_code
product
manufacturing_cost
- 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 India market. The final output contains these fields,
customer_code
customer
average_discount_percentage
- Get the complete report of the Gross sales amount for the customer "Atiq 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
- 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
- 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
- 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

codebasics.io

• For Analysis and Visualization

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

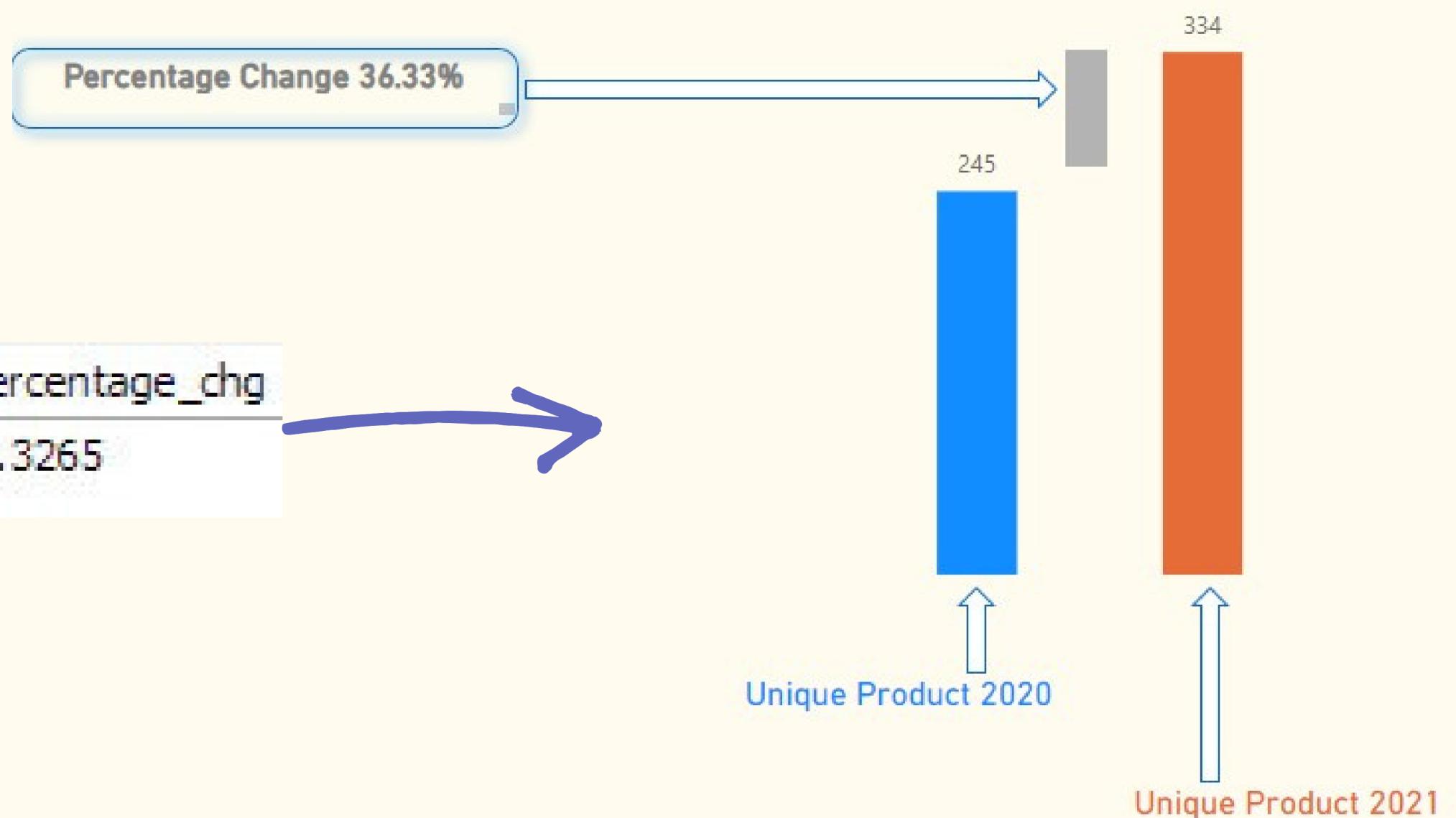
market
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philiphines
South Korea



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

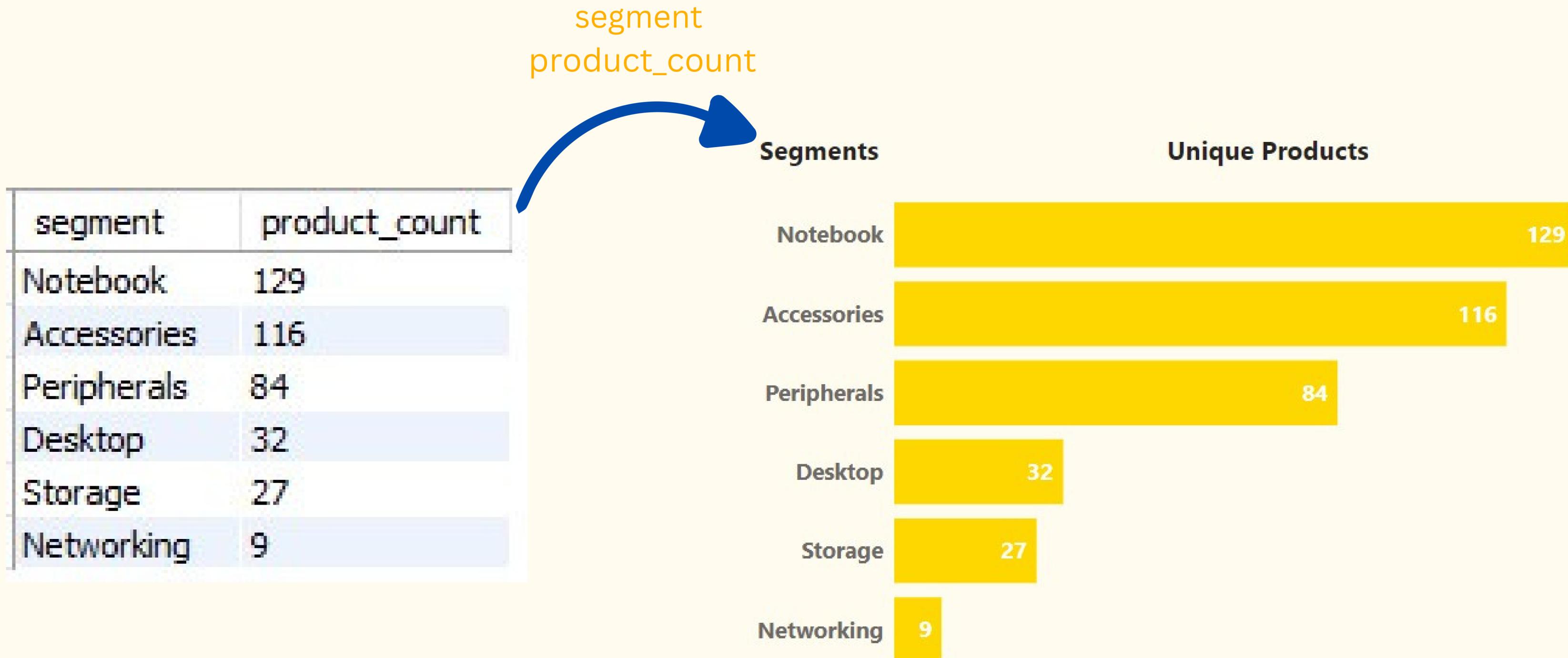
Unique_product_2020	Unique_product_2021	percentage_chg
245	334	36.3265



Insights :

- Demand and production both increased.

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,



Insights:

- Segments: notebooks, accessories, and peripherals are showing significant manufacturing growth as compared to desktops, storage, and networking.
- Notebooks, accessories, and peripherals constitute 83% of the total manufactured product.

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	unqiue_product_2020	unqiue_product_2021	difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5

Segment	Product_count_2021	Product_count_2020	Difference
Accessories	103	69	34
Notebook	108	92	16
Peripherals	75	59	16
Desktop	22	7	15
Storage	17	12	5
Networking	9	6	3

Insights:

- Accessories had the largest increase in production.
- Storage and networking are experiencing slower production growth than other segments.

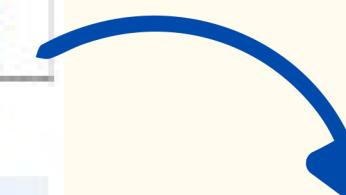
5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,

product_code

product

manufacturing_cost

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



Product having
highest
manufacturing cost

\$ 240.54



A6120110206

AQ HOME Allin1 Gen 2

Product having low
manufacturing cost

\$ 0.89



A2118150101

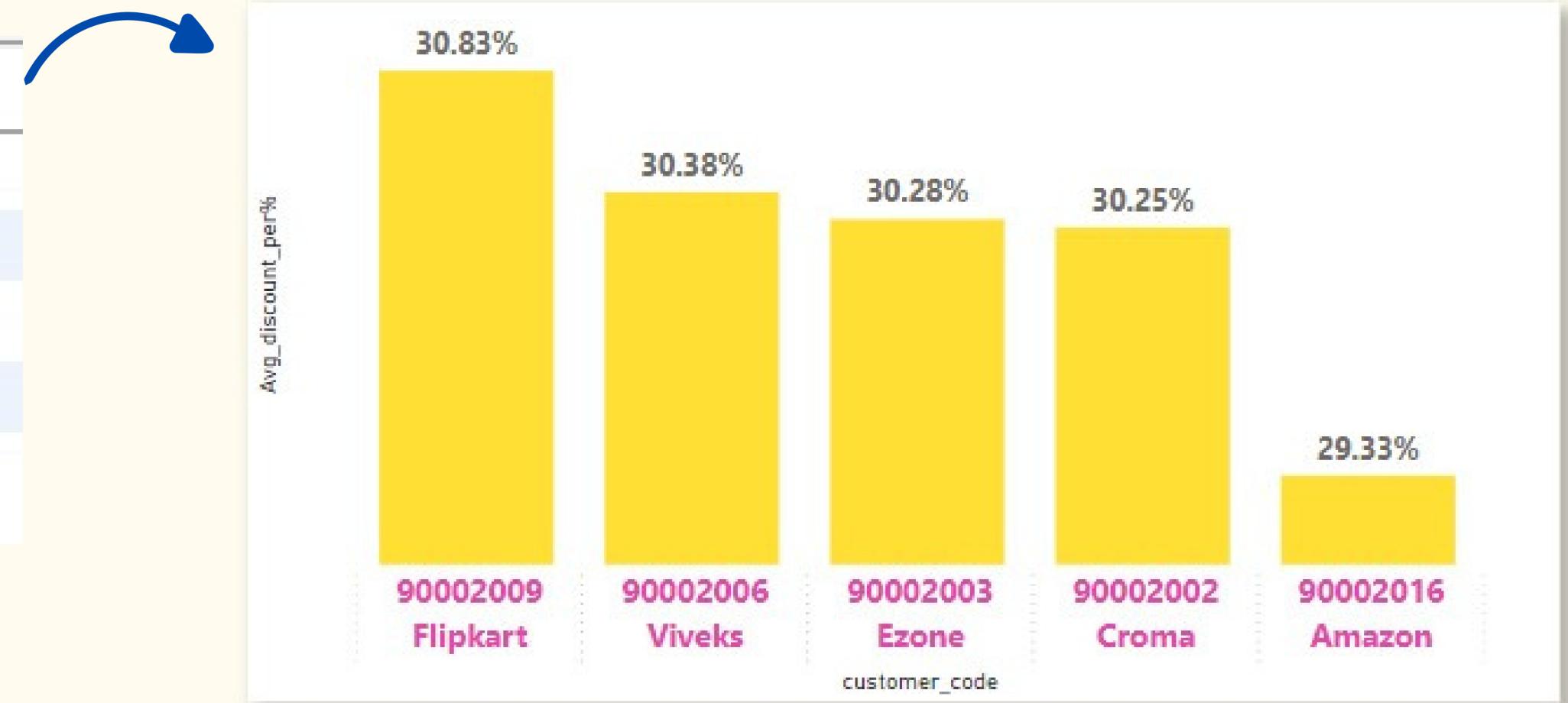
AQ Master wired x1 Ms

Insights:

- Mouse: AQ Master wired x1 Ms (Variant:Standard1) has the lowest manufacturing cost.
- Personal Desktop: AQ Home Allin1 Gen2 (Variant:Plus3) has the highest 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.

customer_code	customer	avg_discount_percentage
90002009	Flipkart	30.8300
90002006	Viveks	30.3800
90002003	Ezone	30.2800
90002002	Croma	30.2500
90002016	Amazon	29.3300



Insights:

- The **largest** 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 take strategic decisions. The final report contains these columns

Month Year

Gross sales Amount

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

FY 2020

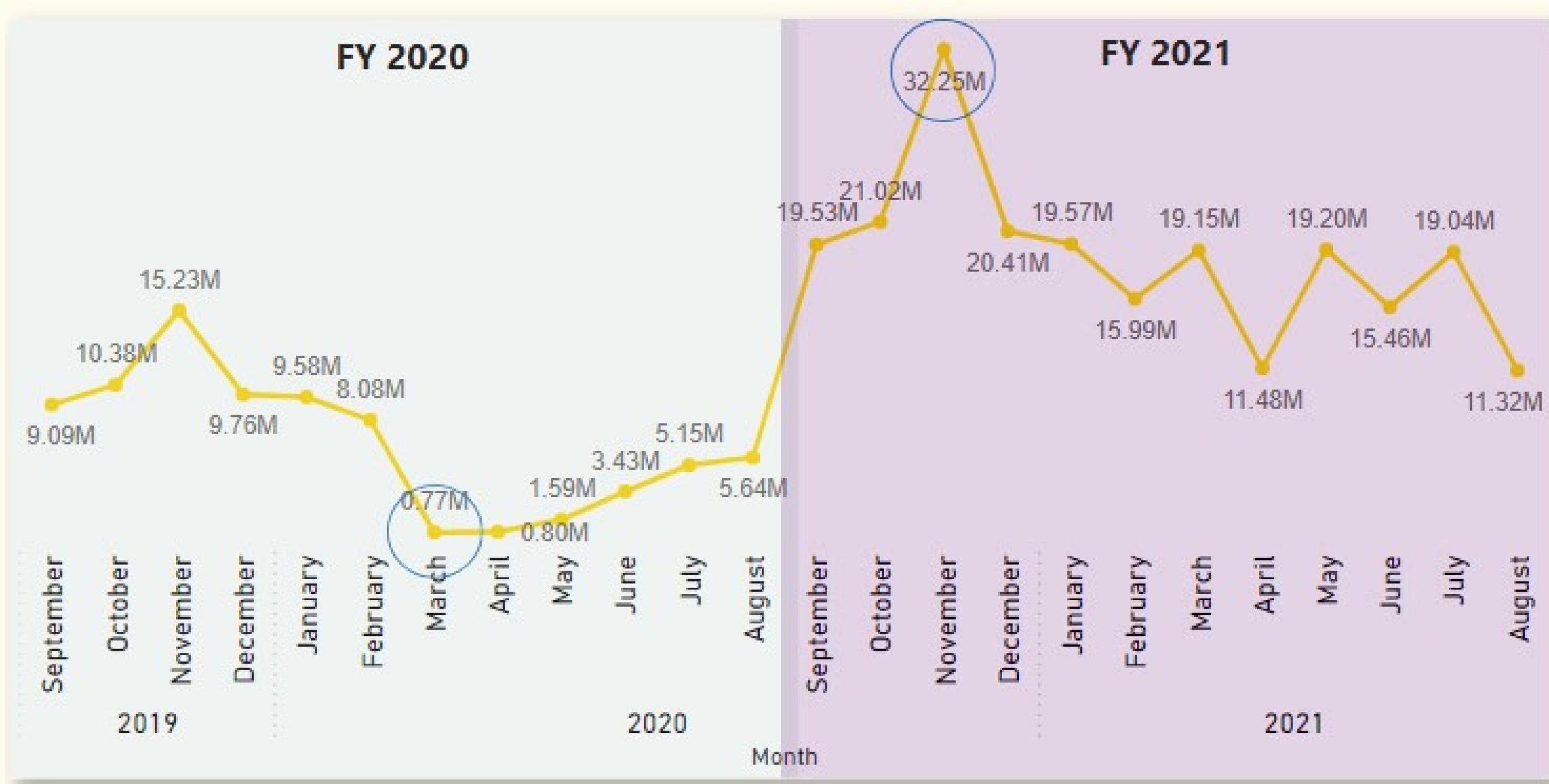
79.5 M

FY 2021

224.4 M

Insights:

- The **lowest Gross** sales total for both fiscal years is in **March(2020)**.
- The **highest Gross** sales total for both fiscal years is in **November (2020)**.
- **73.8%** of the total Gross sales figure is in **FY2021**



Reasons:

- **COVID-19**
- Global Chip shortage

When did the silicon chip shortage start?

From early 2020, when the effects of and the mitigation of the COVID-19 pandemic caused disruptions in supply chains and logistics which, coupled with a 13% increase in global demand for PCs owing to some countries' shift to a stay-at-home economy, impacted the availability of key chips necessary for the manufacturing ...

https://en.wikipedia.org/wiki/2020–present_global_chip_shortage

2020–present global chip shortage - Wikipedia

8. In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the total_sold_quantity,

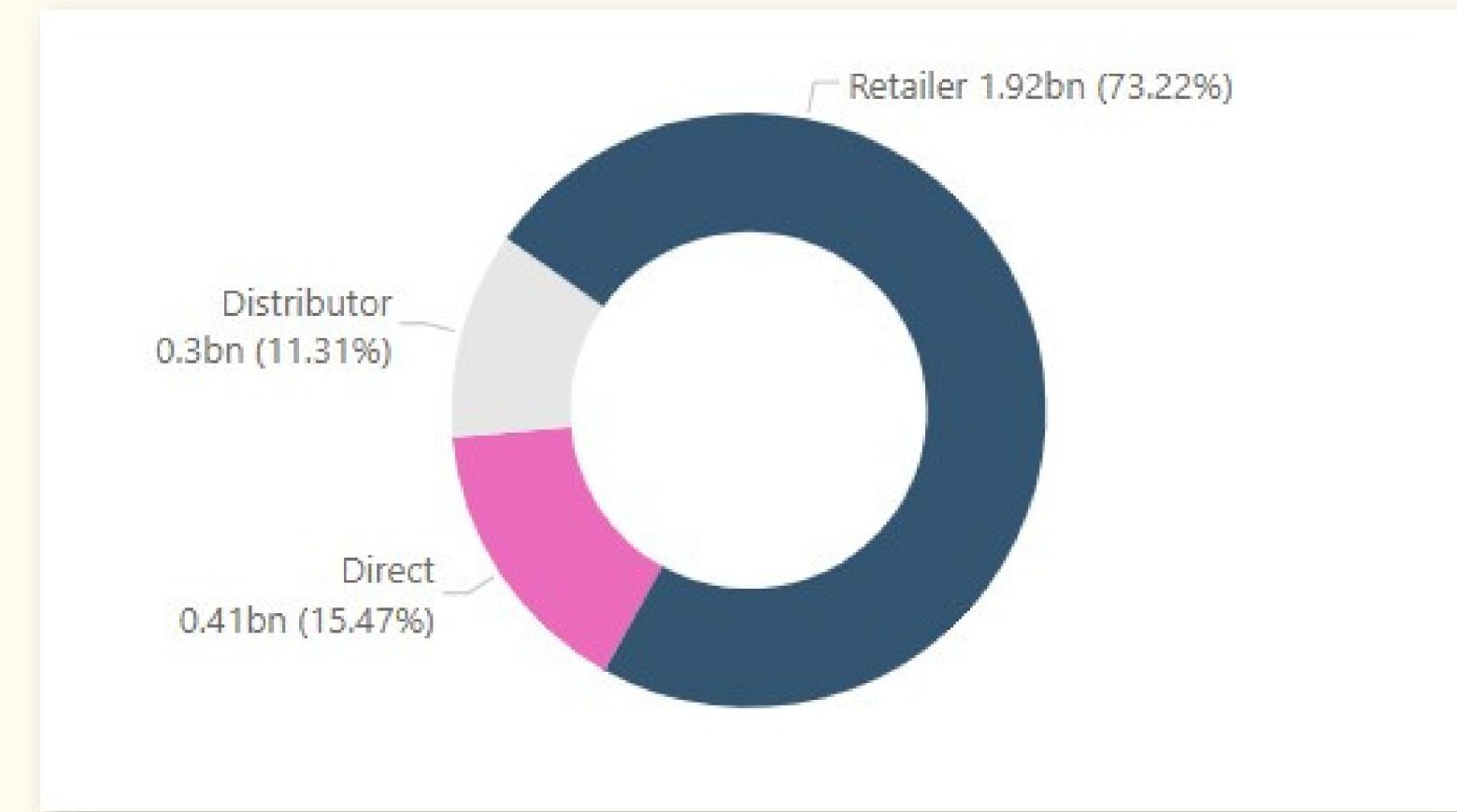


Insights:

- **Quarter 1 of FY2020** saw the most units sold overall, while **Quarter3** had the fewest.
- The **highest** and **lowest** overall sold quantity is in **December** and **March**.
- **Quarter1** accounts for approximately **34%** of the total sold quantity for **FY2020**.

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

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



Insights:

- Channel: "Retailer " helped bring maximum sales to the company with 73.22% as the contribution percentage.
- Channel: "Distributor " makes the least contribution at a percentage of 11.31%.

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
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

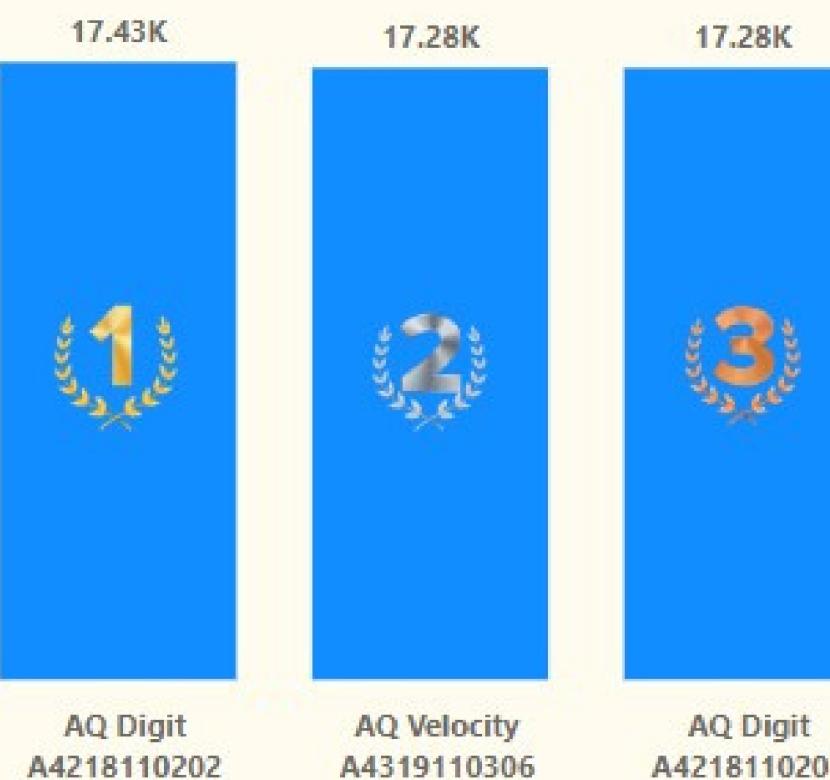
Insights:

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

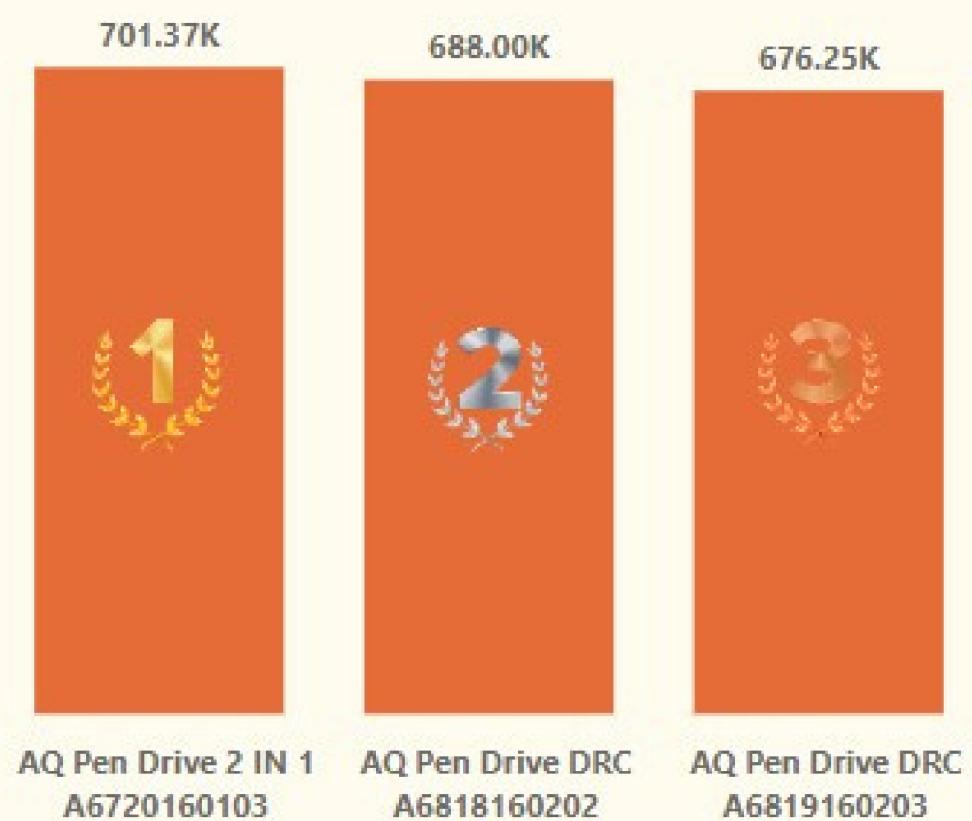
division ● P & A



division ● PC



division ● N & S



THANK YOU