ABOUT ATLIQ HARDWARE

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

PROBLEM STATEMENT

❑ **The management noticed that they do not get enough insights to 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. Hence, he decided to conduct a SQL challenge which will help him understand both the skills.**

CHALLENGE

Imagine yourself as the applicant for this role and perform the following task:

To Provide Insights to Management in Consumer Goods Domain

Source : There are 10 ad hoc requests for which the business needs insights.

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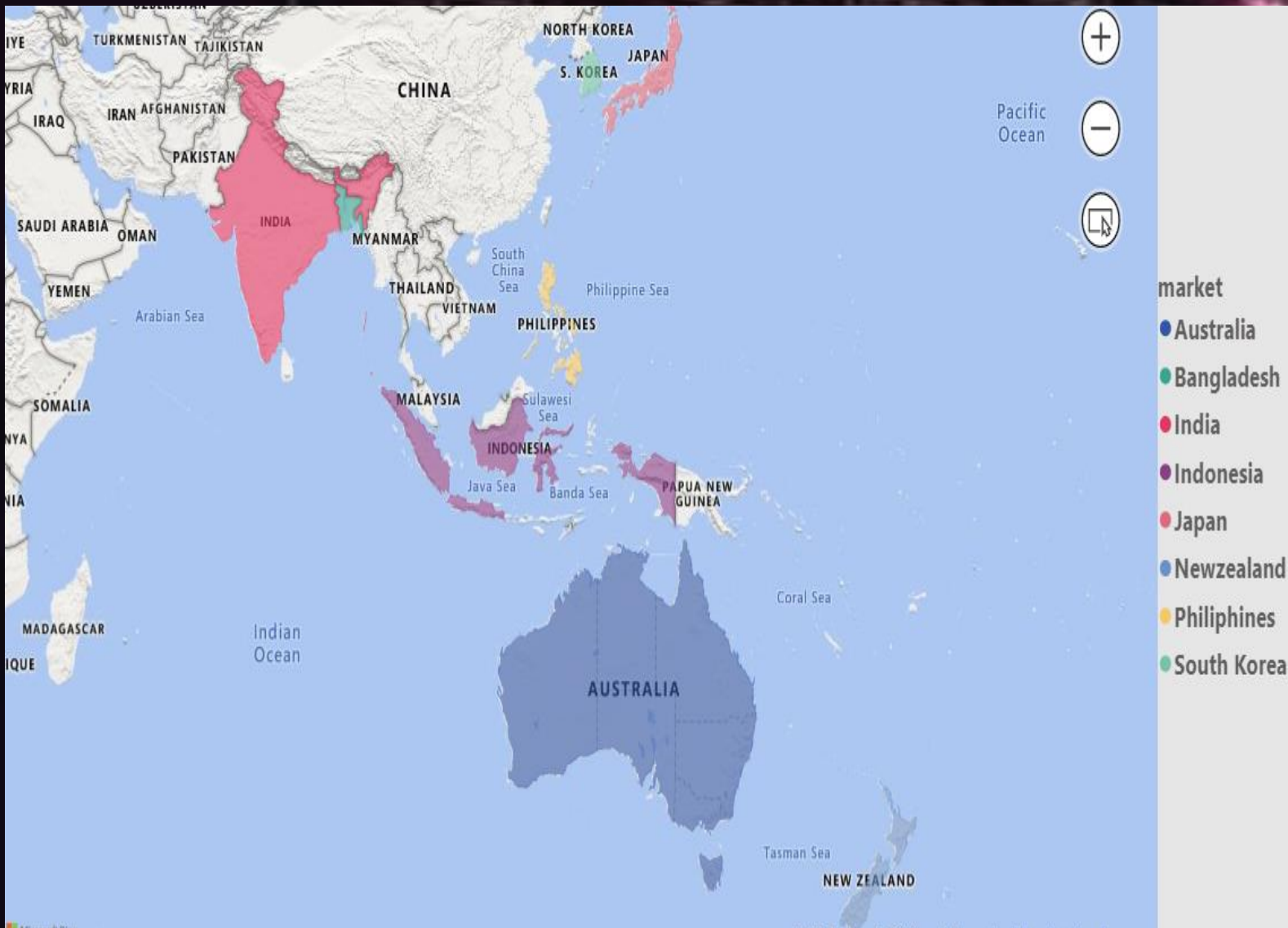
OUTPUT

Result Grid	Filter Ro
market
▸ India
Indonesia
Japan
Philipines
South Korea
Australia
Newzealand
Bangladesh

Atliq Exclusive" operates its business in the APAC region in Markets of 8 following countries

1. INDIA
2. INDONESIA
3. JAPAN
4. PHILIPINES
5. SOUTH KOREA
6. AUSTRALIA
7. NEWZEALAND
8. BANGLADESH

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

OUTPUT

| unique_product2020	unique_product2021	percentage_chg
245	334	36.33

Insights

Result Grid	Filter Rows:	Export:	Wrap Cell Content:

unique_product2020	unique_product2021	percentage_chg
245	334	36.33

- **36.33% products increased in year 2021 compared to year 2020**
- **89 new products were introduced in year 2021**

100%

Sum of unique_product2020 — 245

Sum of unique_product2021 — 334

136.3%
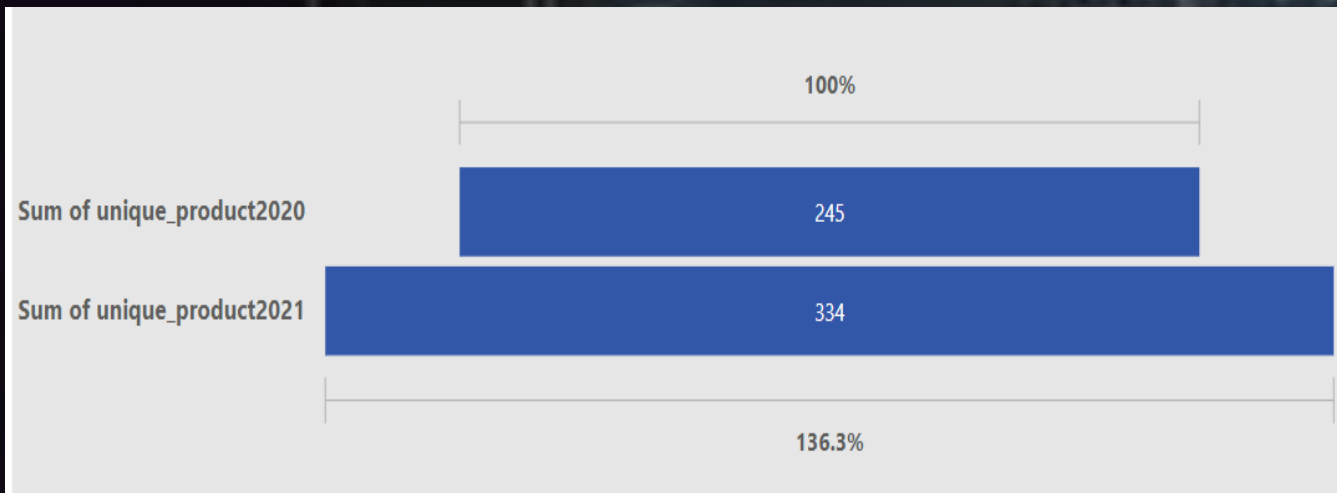
Request 3: Provide a report with all the unique product counts for each segment and sort them in descending order of product counts
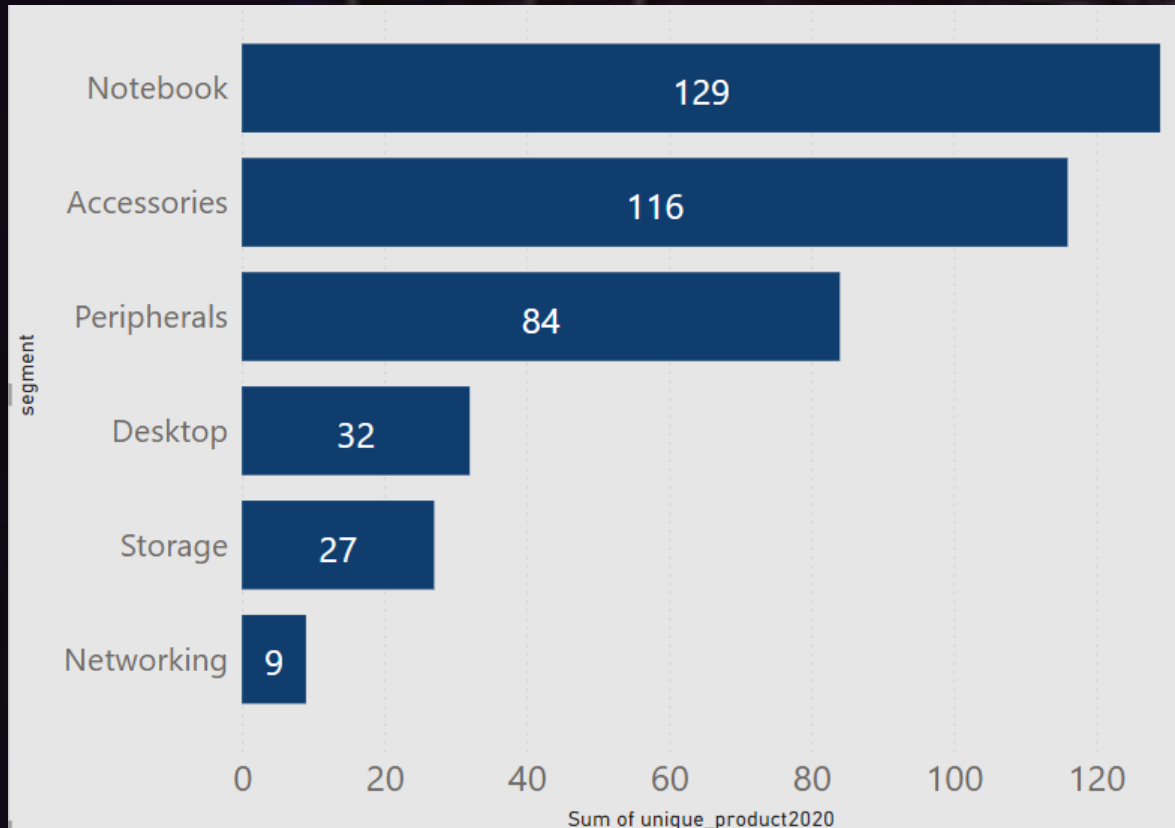
The final output contains 2 fields, segment ,product_count

OUTPUT

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

Request 4: Which segment had the most increase in unique products in 2021 vs 2020

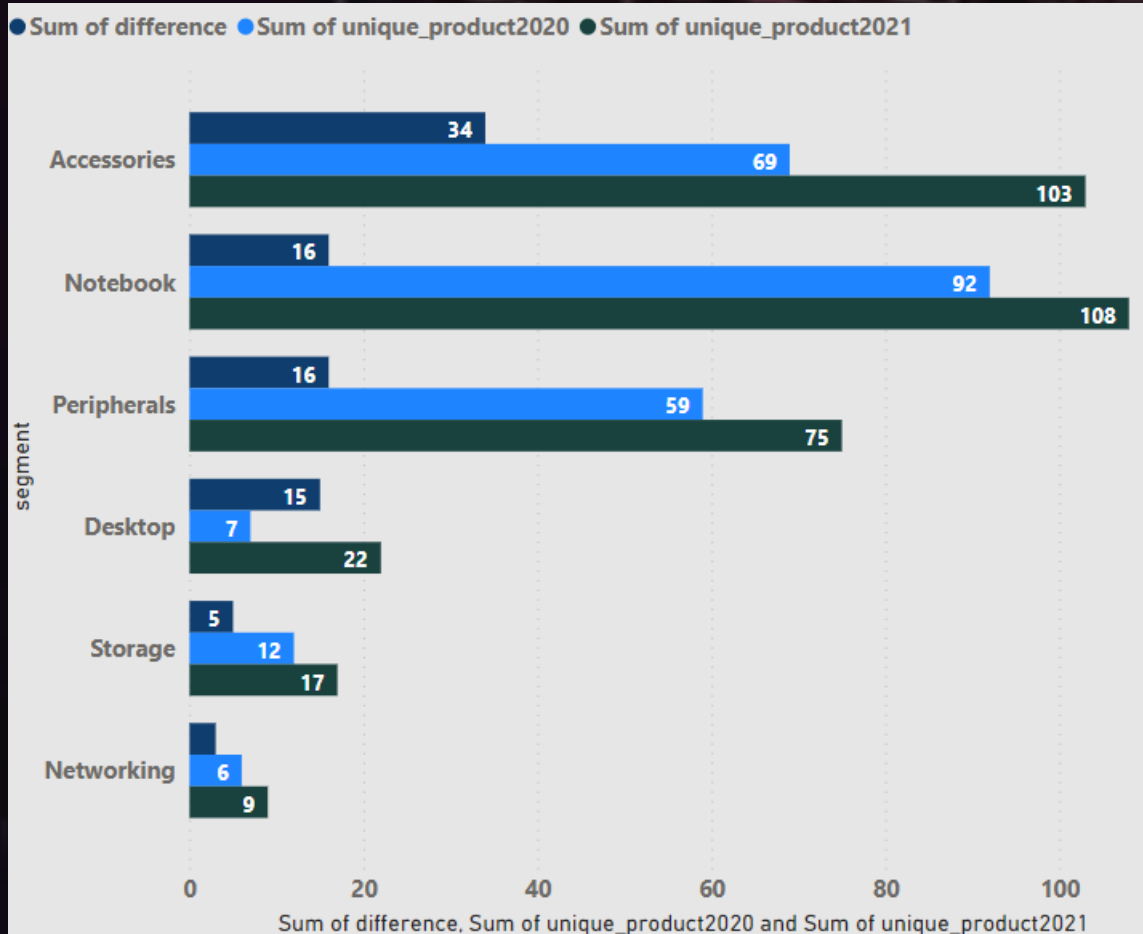The final output contains these fields, segment ,product_count_2020 product_count_2021 , difference

OUTPUT

segment	unique_product2020	unique_product2021	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

Insights

1. **Accessories** segment had the most increase in unique products in 2021 vs 2020 (34)

2. **Networking** segment has the lowest increase in unique products in 2021 vs 2020(3)

3. Increase in product_count in Storage segment is also not so impressive

Request 5: Get the products that have the highest and lowest manufacturing costs.

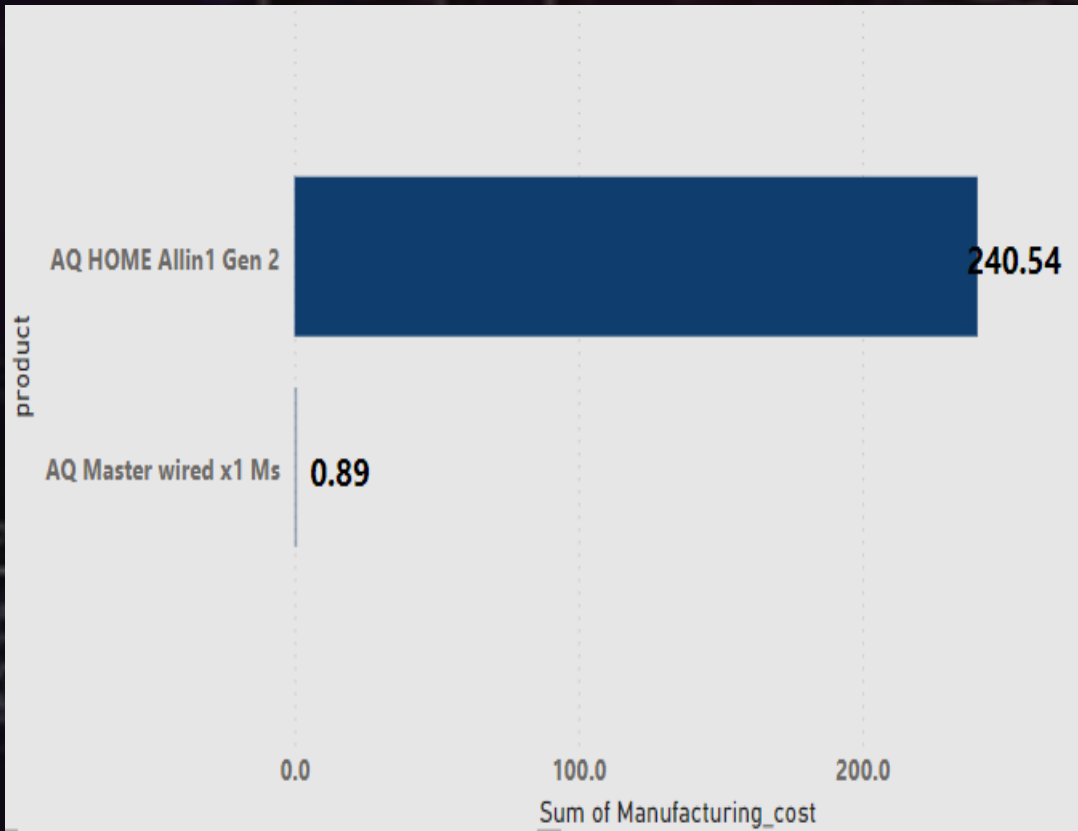**The final output should contain these fields, product_code, product manufacturing_cost**

OUTPUT

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

1. **AQ HOME Allin1 Gen 2** is the product that has highest manufacturing cost having manufacturing cost of **240.5364**
2. **AQ Master wired x1 Ms** is the product that has lowest manufacturing cost having manufacturing cost of **0.8920**

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.
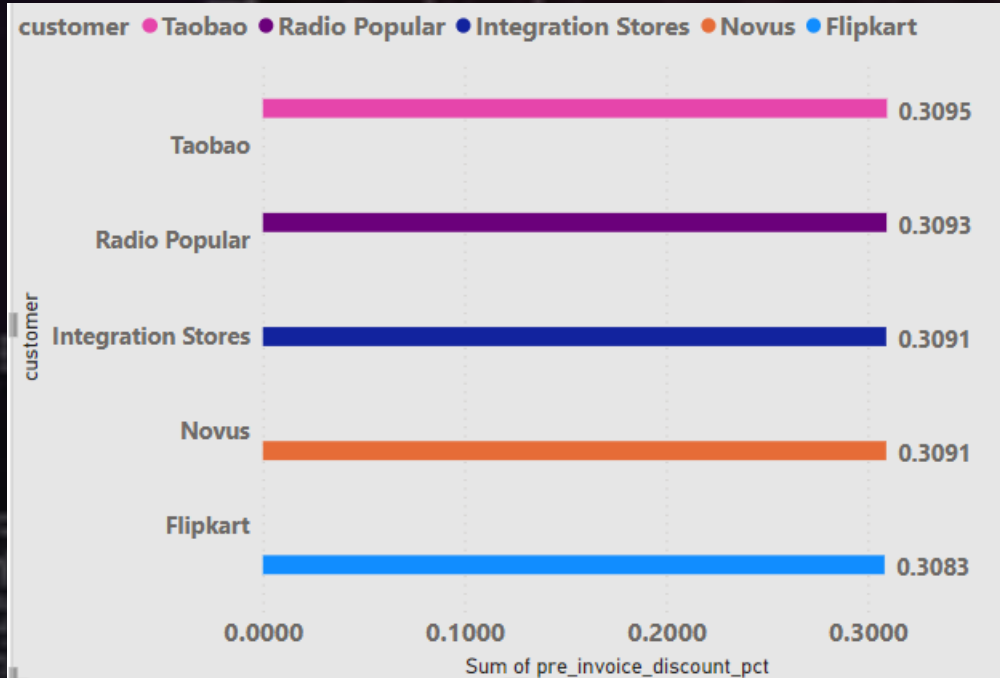
The final output contains these fields, customer_code customer average_discount_percentage

OUTPUT

customer_code	customer	pre_invoice_discount_pct
90001021	Taobao	0.3095
90013122	Radio Popular	0.3093
80006155	Novus	0.3091
90020099	Integration Stores	0.3091
90002009	Flipkart	0.3083

- **The top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market are Taobao, Radio Popular , Integration stores,Novus and Flipkart.**

- **There is very quite difference in top 5 Customers having an average high pre_invoice_discount_pct**

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.
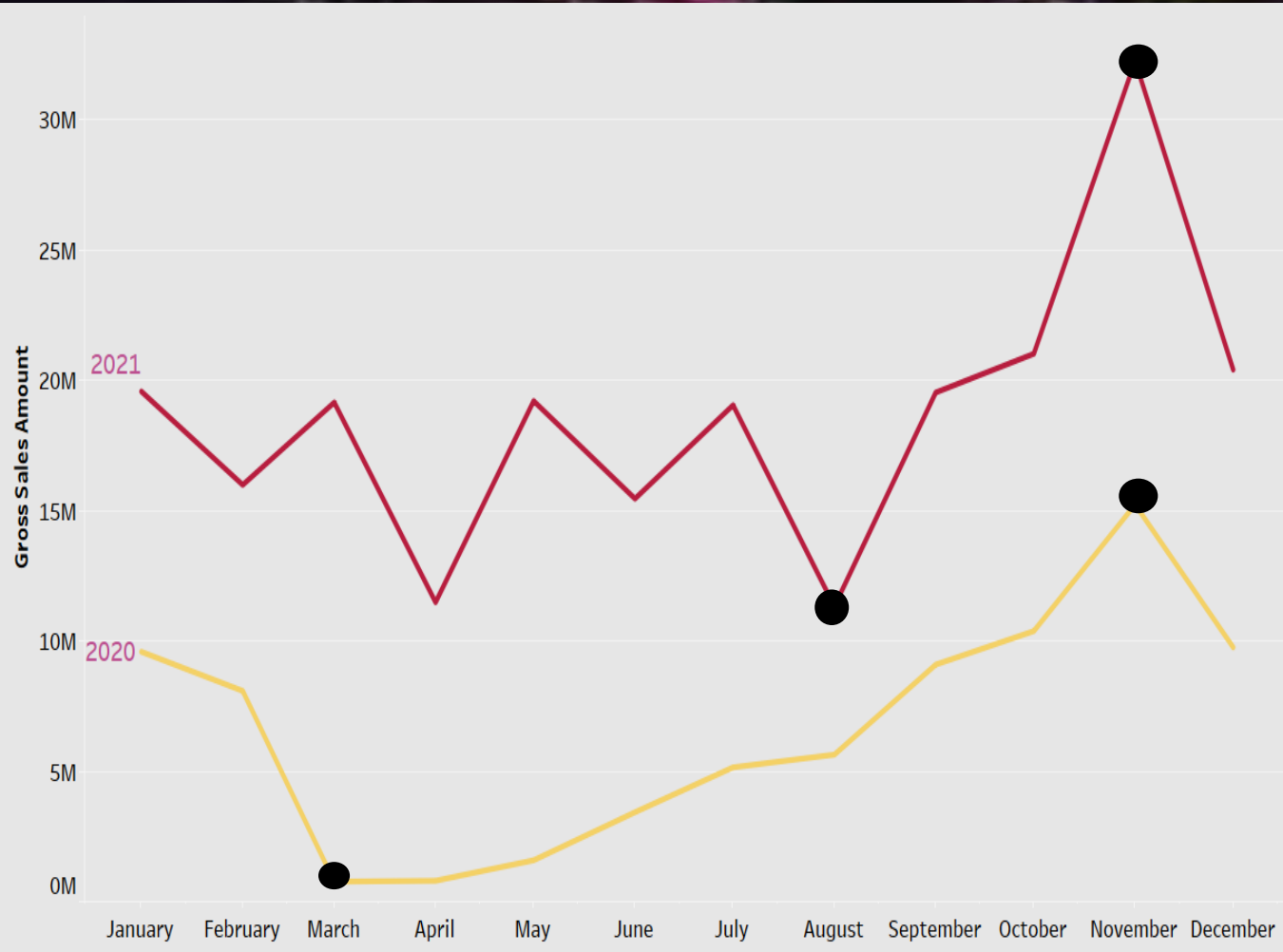
The final report contains these columns: Month Year Gross sales Amount

OUTPUT

month	fiscal_year	gross_sales_amount
November	2021	32247289.7946
October	2021	21016218.2095
December	2021	20409063.1769
January	2021	19570701.7102
September	2021	19530271.3028
May	2021	19204309.4095
March	2021	19149624.9239
July	2021	19044968.8164
February	2021	15986603.8883
June	2021	15457579.6626
November	2020	15231894.9669
April	2021	11483530.3032
August	2021	11324548.3409

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

- For the customer 'Atliq Exclusive' :
- **In year 2020** – Gross sales amount fall in the month of march , then as the month progressed it increased and was maximum in the month of November.
- **In Year 2021** - Gross sales amount was minimum in the month of August and reach to maximum in the month of November.
- Overall gross sales amount was increased from year 2020 to 2021.
- Gross sales amount increases in the month of November in both year 2020 and 2021

Conversion to visual

Insights

Quarter ● Q1 ● Q2 ● Q4 ● Q3

2075087 (9.99%)

7005619 (33.72%)

5042541 (24.27%)

6649642 (32.01%)
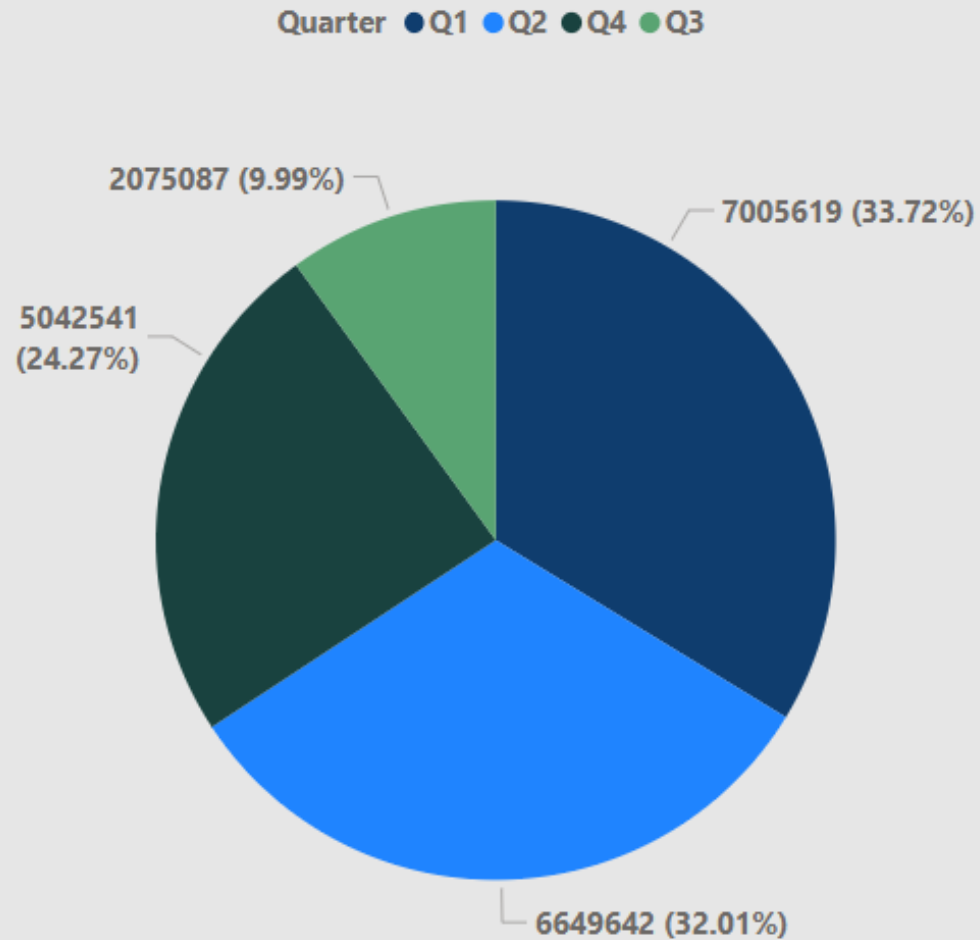
1. **Maximum Quantity sold in the Quarter 1 that is in the month of sept,oct,nov**

2. **Minimum Quantity sold in the Quarter 3 that is in the month March,April ,May**

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

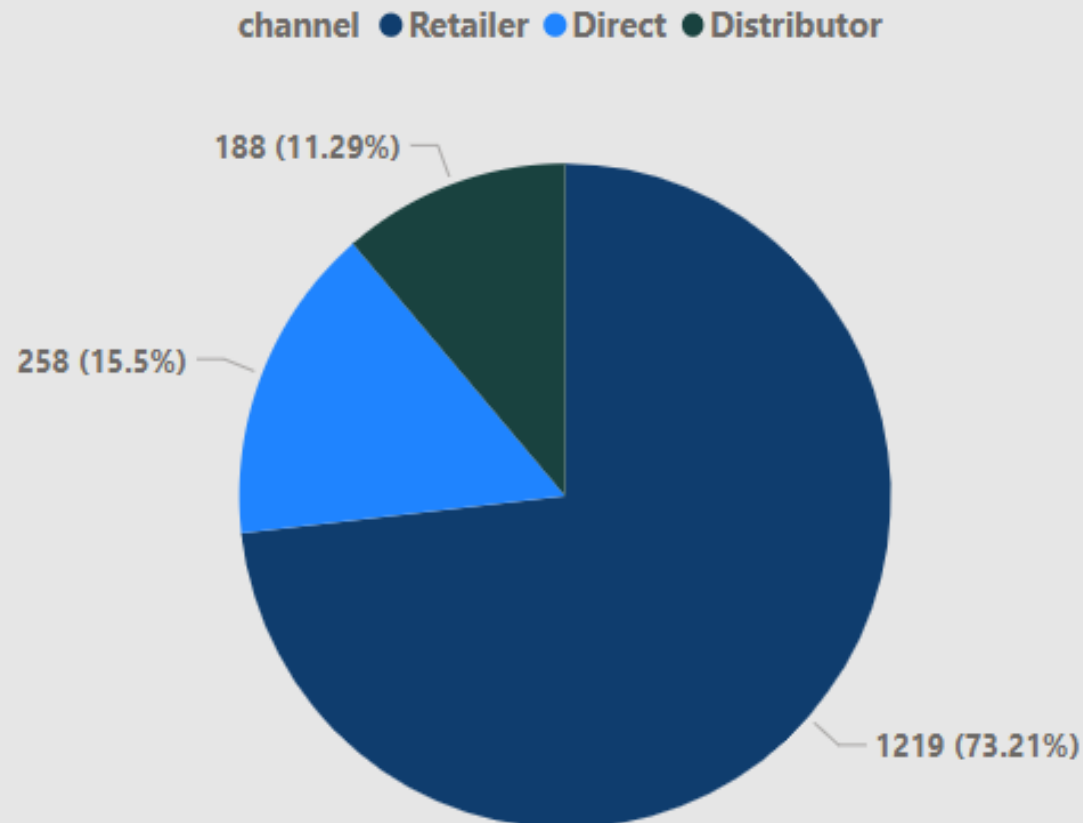The final output contains these fields, channel, gross_sales_mln,percentage

OUTPUT

channel	gross_sales_mln	percentage
Retailer	1219	73.21
Direct	258	15.50
Distributor	188	11.29

1. **Retailer channel In which products are sold to online or offline stores** bring more gross sales in the fiscal year 2021 and its percentage of contribution is **73.21%**

2. **Distributor channel in which product sold to middleman** has brings least gross sales in the fisical year 2021 having percentage of contribution **11.29%**

Request 10: Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

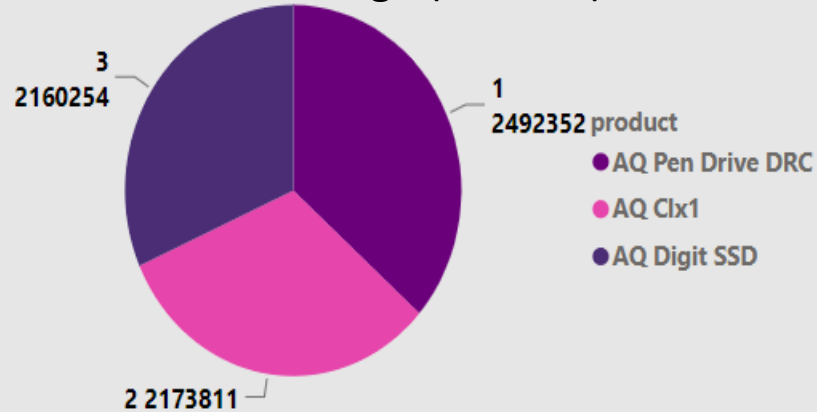The final output contains these fields, division, product_code

OUTPUT

division	product	total_qty_sold	rank_order
N & S	AQ Pen Drive DRC	2492352	1
N & S	AQ Clx1	2173811	2
N & S	AQ Digit SSD	2160254	3
P & A	AQ Gamers Ms	4043543	1
P & A	AQ Master wired x1 Ms	4025721	2
P & A	AQ Master wireless x...	4012628	3
PC	AQ Digit	203954	1
PC	AQ Elite	202272	2
PC	AQ Gen X	168489	3

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Network and Storage (N and S)


```
3
2160254              1
                  2492352  product
                         ● AQ Pen Drive DRC
                         ● AQ Clx1
                         ● AQ Digit SSD
2 2173811
```

Personal Computer (PC)


```
3 168489           1 203954

                       product
                         ● AQ Digit
                         ● AQ Elite
                         ● AQ Gen X
2 202272
```

Peripherals and Accessories (P and A)


```
3 4012628          1 4043543

                       product
                         ● AQ Gamers Ms
                         ● AQ Master wired x1 Ms
                         ● AQ Master wireless x1 Ms
2 4025721
```
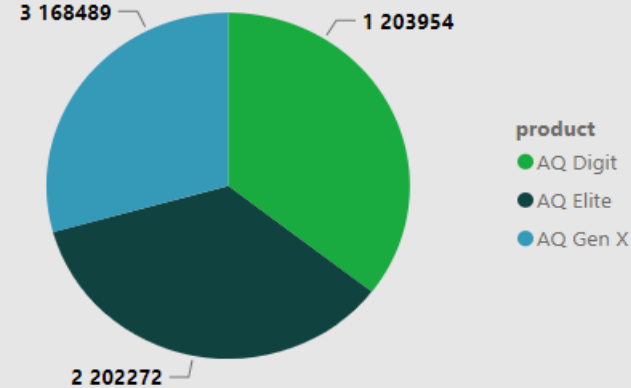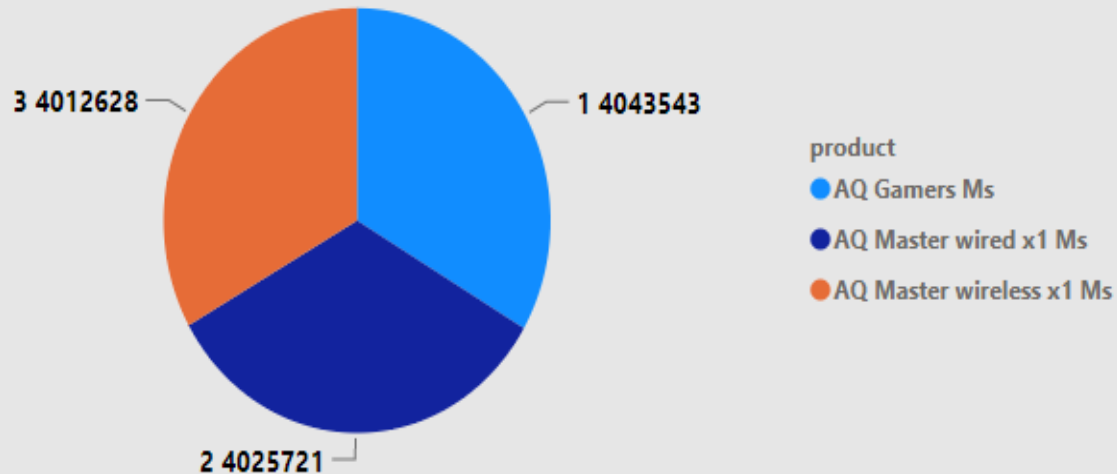
1. IN N & S division AQ Pen Drive DRC has maximum sold _quantity

2. IN P & S division AQ Games Ms has maximum sold _quantity

3. IN PC division AQ Digit has maximum sold _quantity