AtliQ Hardwares

Consumer Goods
Ad-Hoc Insights

[SQL Project]

Created by: Yerram Sai Kiran

Project Background:

❑ Atliq Hardwares is one of the leading computer hardware producers in India and has expanded it's operations in other countries too.

❑ However, in order to make quick and data-driven decisions the management noticed that they do not get enough insights from the data.

❑ So Tony Sharma, the data analytics director, wanted to hire few

junior data analysts for their team who were good at both tech and soft skills.

❑ Hence, he decided to conduct a SQL challenge which will help him understand both the skills of the candidates.

Provided Data:

Task:

❑ Ad-hoc requests file

❑ A dataset with 6 tables

❑ Meta data

❑ There are 10 ad hoc requests for which the business needs insights. You need to run a SQL query to answer these requests.

❑ Prepare a presentation of insights for the top-level management.

gdb023 dim_product
- category
- division
- product
- product_code
- segment
- variant

gdb023 dim_customer
- channel
- customer
- Σ customer_code
- market
- platform
- region
- sub_zone

gdb023 fact_sales_monthly
- Σ customer_code
- date
- Σ fiscal_year
- product_code
- Σ sold_quantity

gdb023 fact_gross_price
- Σ fiscal_year
- Σ gross_price
- product_code

gdb023 fact_pre_invoice_deductions
- Σ customer_code
- Σ fiscal_year
- Σ pre_invoice_discount_pct

gdb023 fact_manufacturing_cost
- Σ cost_year
- Σ manufacturing_cost
- product_code

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Ad-hoc Business Requests

Request 1:

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

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Insights:

In APAC region, Atliq Exclusive operates its business in **8** prominent markets.

Request 2:

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

i) unique_products_2020
ii) unique_products_2021
iii) percentage_chg

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33
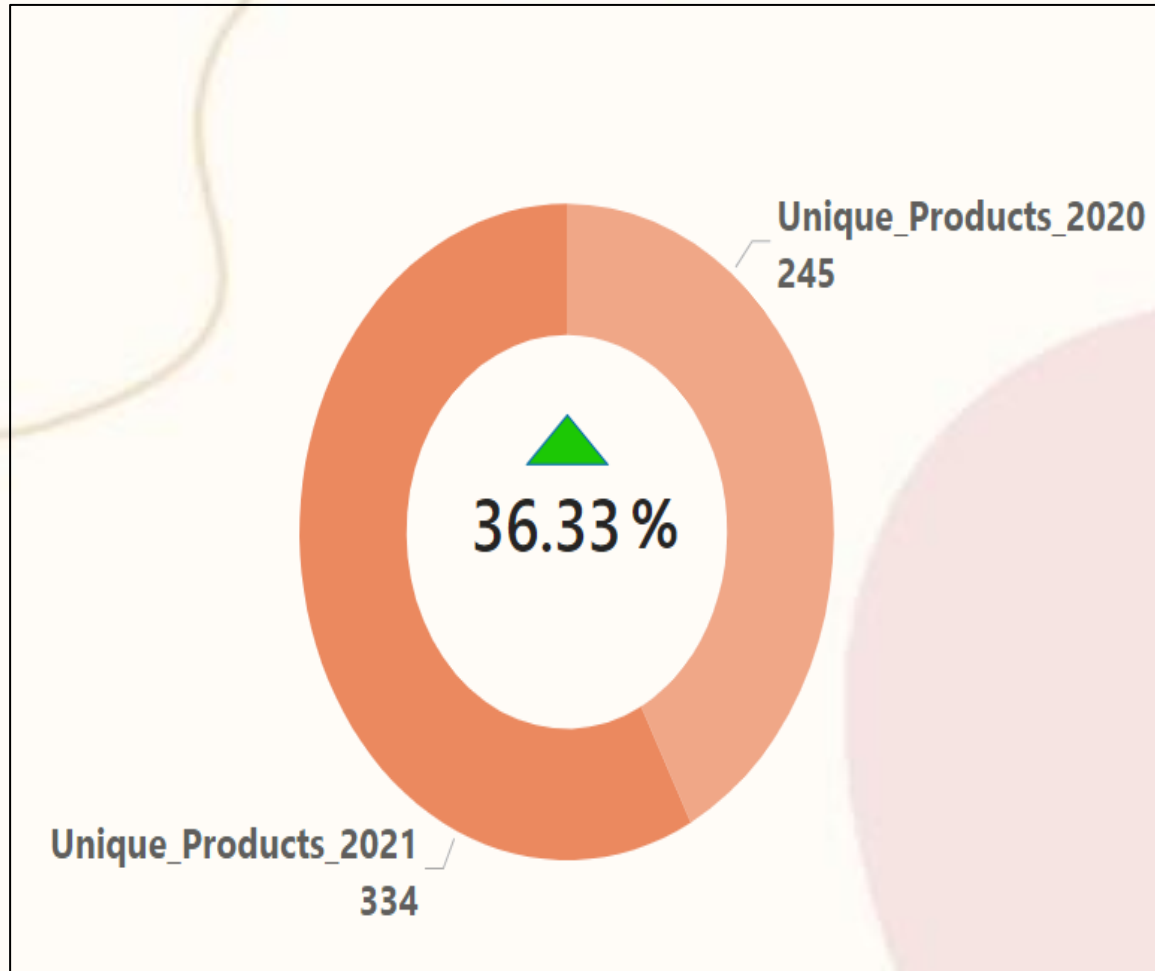
Insights:

i) In FY20 the total number of products were 245

ii) In FY21 **89** new products were launched into the market place (increase of 36.33 %) and the total number of products from Atliq Hardwares reached to 334.

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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:

i) segment
ii) product_count

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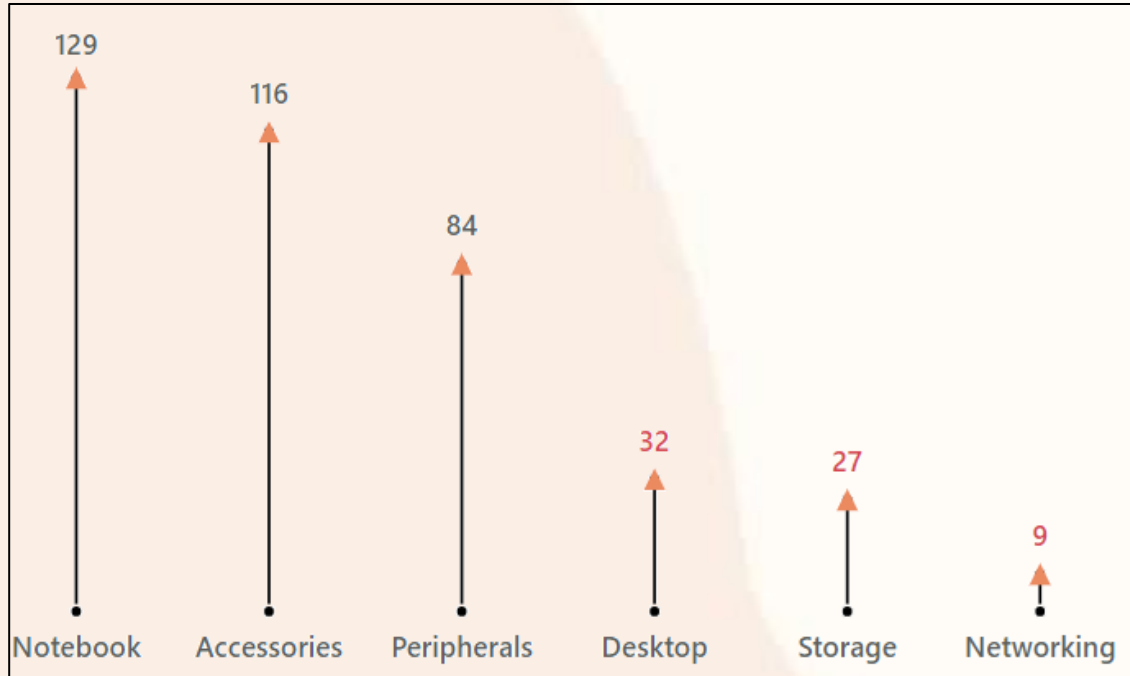
Insights:

Atliq Hardwares categorized its products into 5 segments

Among those segments **Notebook, Accessories and Peripherals** contains more number of unique products as compared to Desktop, Storage and Networking.

Request 4:

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

i) segment
ii) product_count_2020
iii) product_count_2021
iv) 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
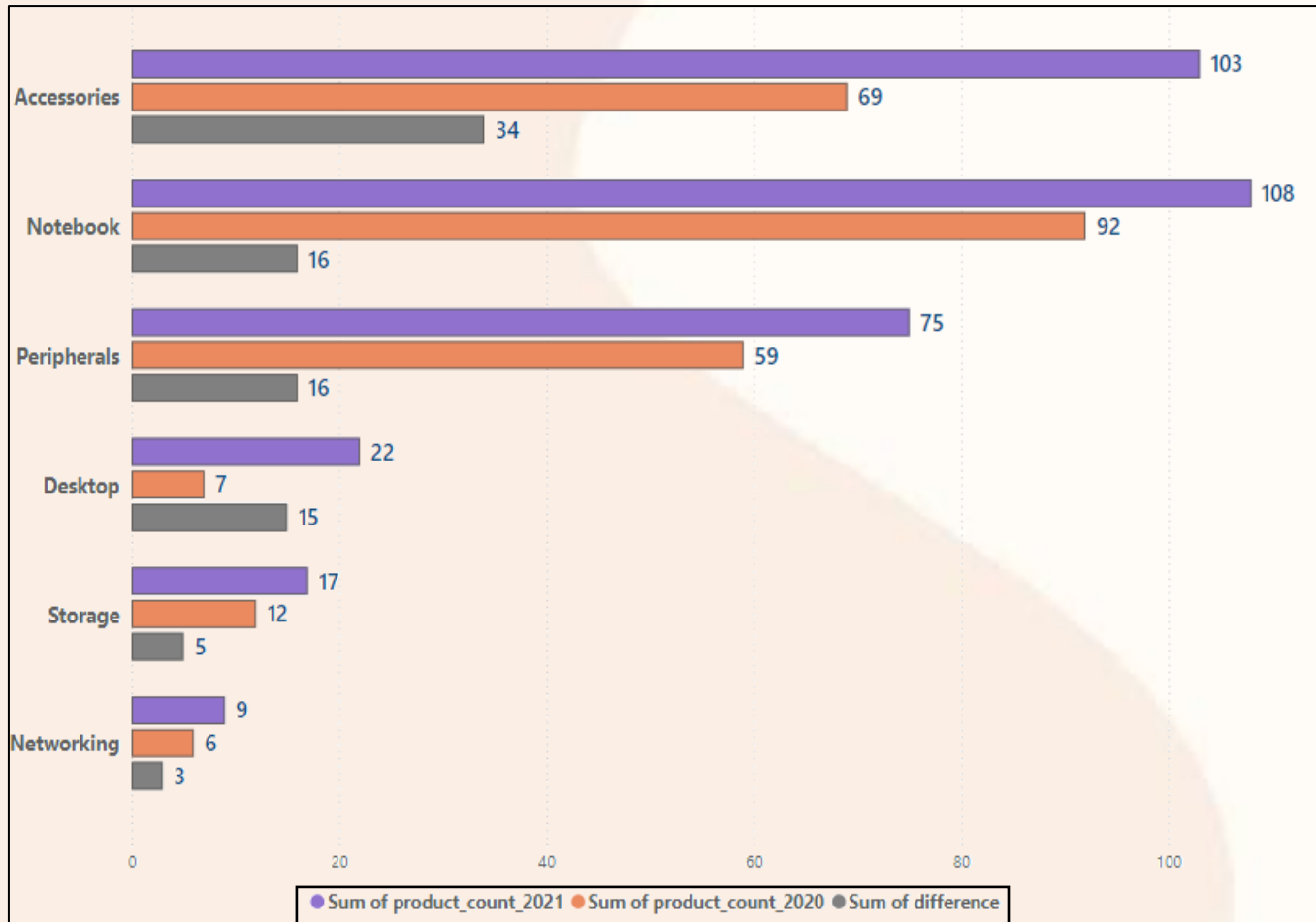
Request 5:

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

i) product_code
ii) product
iii) manufacturing_cost

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

Insights:

Among all the products manufactured by Atliq Hardwares,

i) Product " **AQ Home Allin1 Gen 2"** has the highest manufacturing cost

ii) Product – **"AQ Master wired x1 Ms"** has the least manufacturing cost.

AQ Home Allin1 Gen 2
[$240.54]

AQ Master wired x1 Ms
[$0.89]

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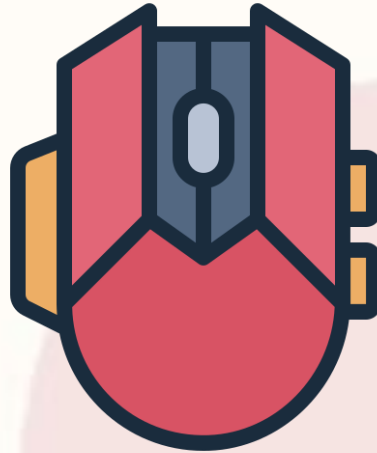
Request 6:

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:

i) customer_code
ii) customer
iii) average_discount_percentage

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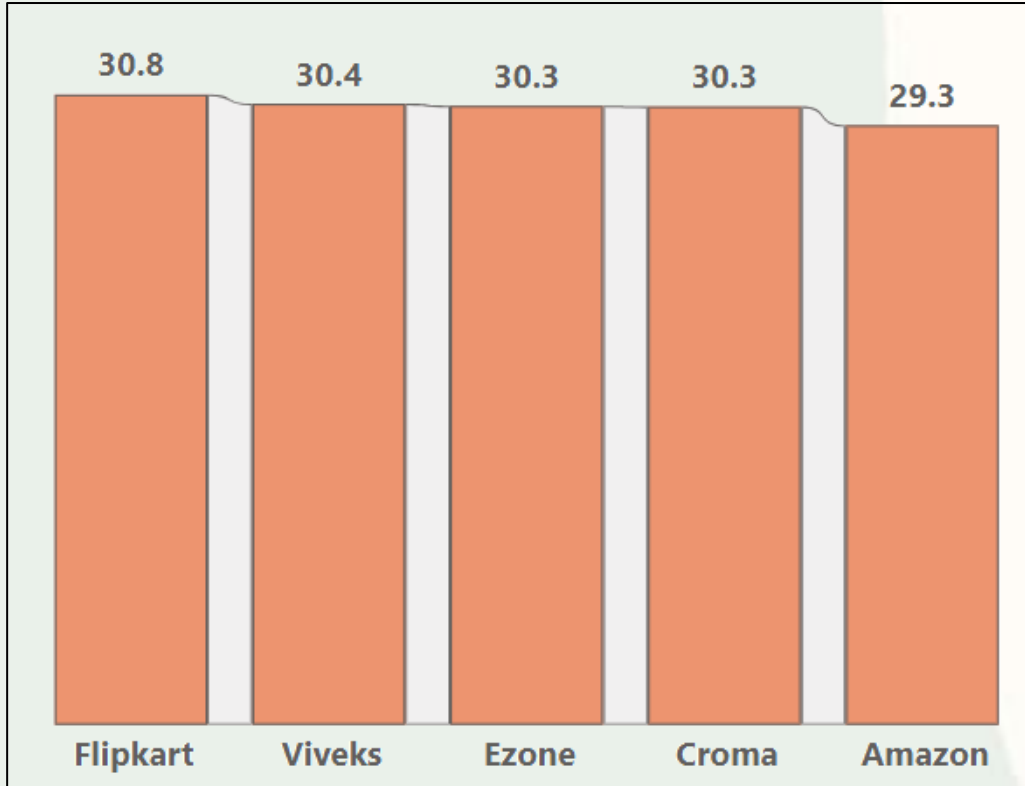
Insights:

In FY21, Atliq Hardwares has given almost the same average pre_invoice_discount_percentage to the top 5 customers of Indian market and among them:

Flipkart has received the **highest** and

Amazon has received the **least** average pre_invoice_discount_percentage respectively.

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:

i) Month
ii) Year
iii) Gross sales Amount

Output:

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

Values in millions

FY 2020 values: September 9.09, October 10.38, November 15.23, December 9.76, January 9.58, February 8.08, March 0.77, April 0.80, May 1.59, June 3.43, July 5.15, August 5.64

FY 2021 values: September 19.53, October 21.02, November 32.25, December 20.41, January 19.57, February 15.99, March 19.15, April 11.48, May 19.20, June 15.46, July 19.04, August 11.32
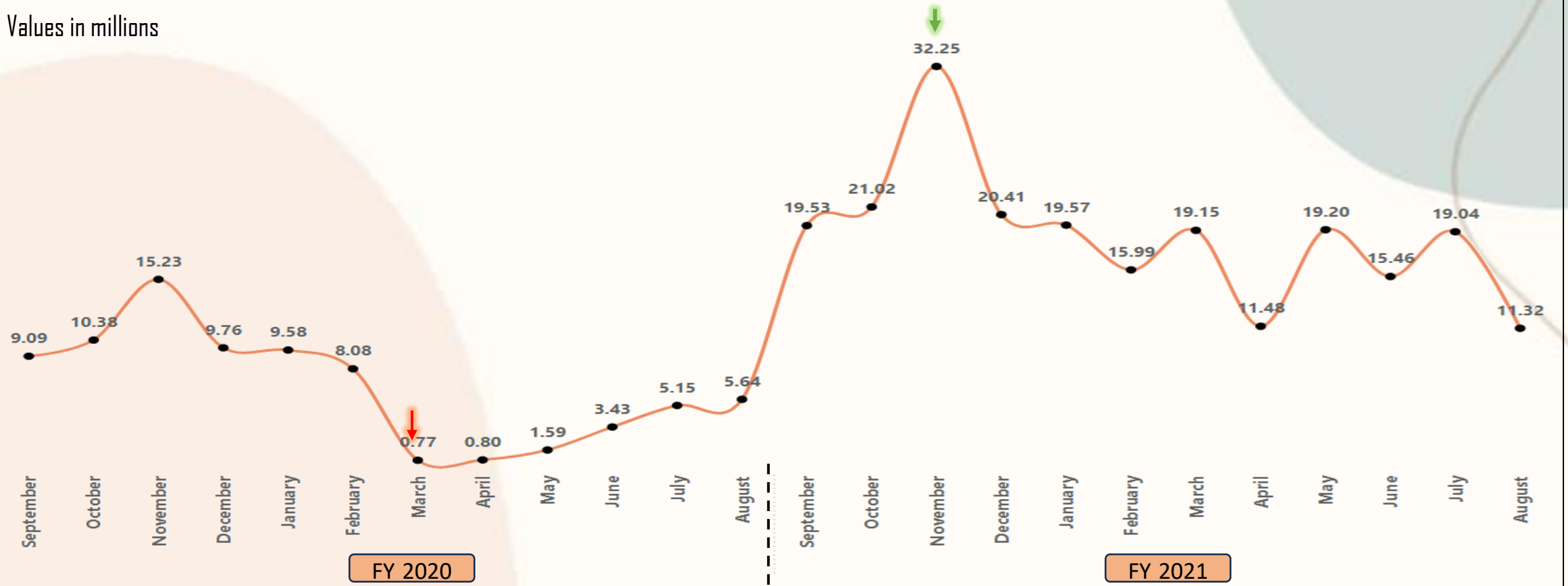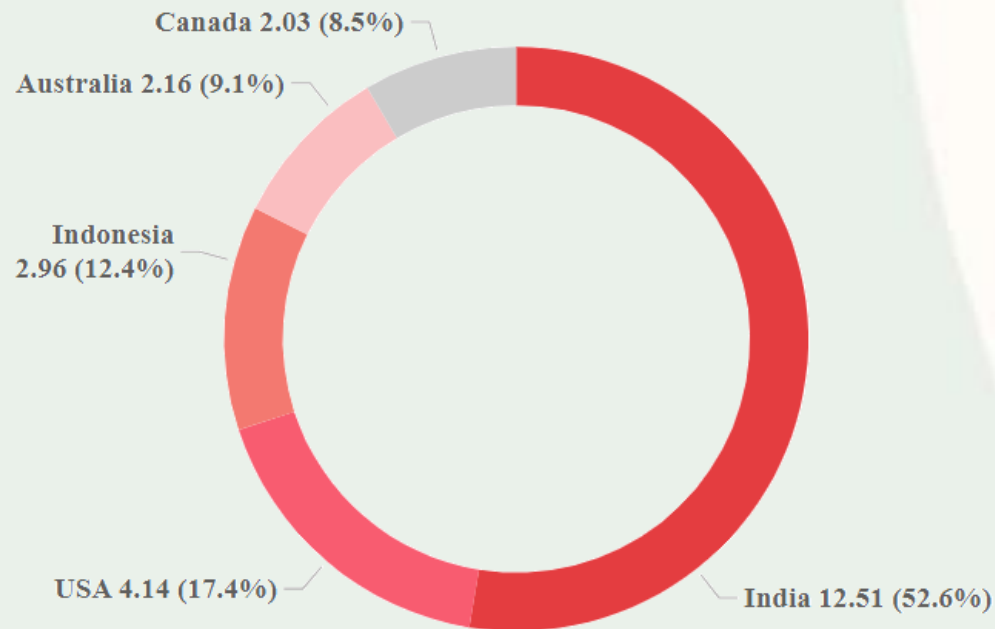
Insights:

Atliq Exclusive had its least sales of **0.77M in March 2020** and it has recorded its highest sales of **32.25M in November 2021**.

Top 5 markets of Atliq Exclusive in November, FY2021

market	gross_sales_millions
India	12.51
USA	4.14
Indonesia	2.96
Australia	2.16
Canada	2.03

Canada 2.03 (8.5%)
Australia 2.16 (9.1%)
Indonesia 2.96 (12.4%)
USA 4.14 (17.4%)
India 12.51 (52.6%)

Gross_sales_millions by market

[Additional insights]

Reasons:

i)   The reason of low sales in March 2020 could be the **Covid pandemic**

ii) Upon analyzing the top 5 market place sales, it has been noticed that **52.6%** of total sales in November month is from **Indian market** and this could be due to the **Diwali** [4 November 2021] festival season in India and more number of purchases may have been made.

Request 8:

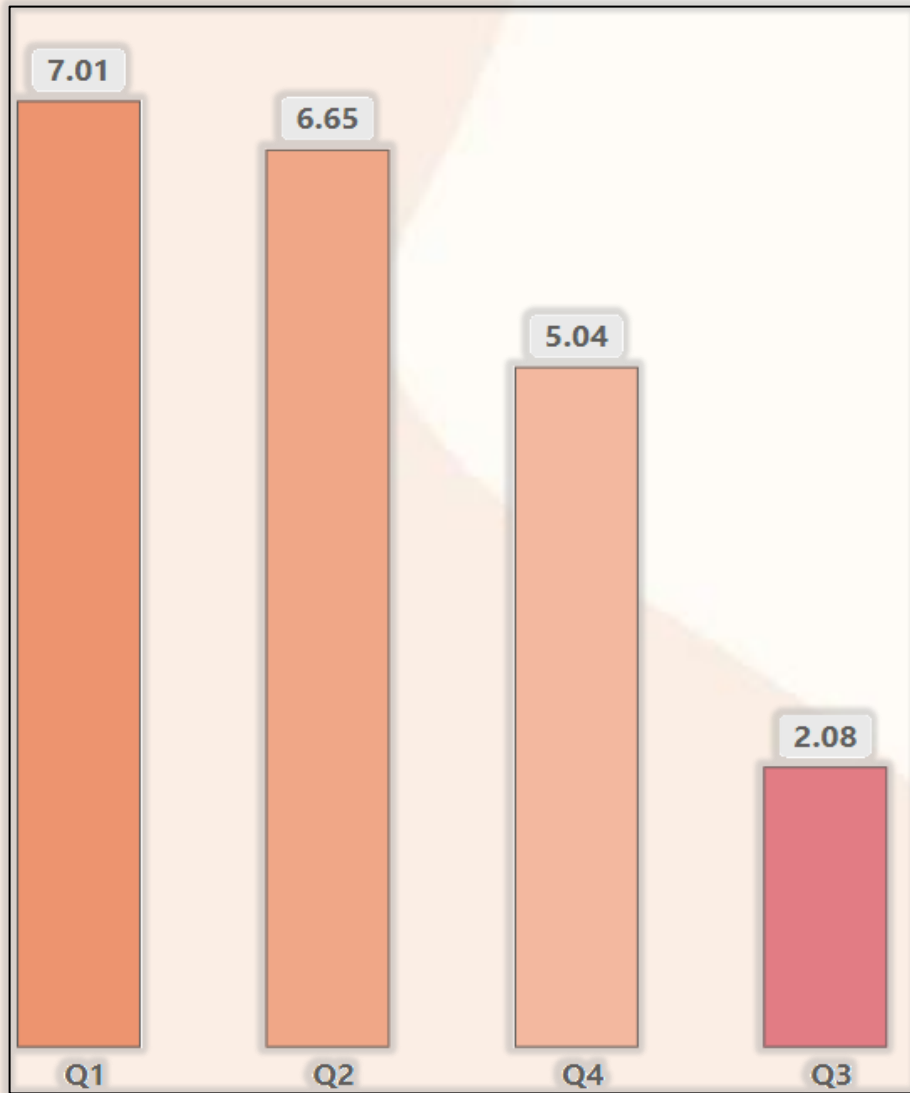In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the total_sold_quantity.

i) Quarter
ii) total_sold_quantity

Quarter	total_sold_quantity_mln
Q1	7.01M
Q2	6.65M
Q4	5.04M
Q3	2.08M

Insights:

i) In FY2020, the maximum products sold were in **Q1** contributing a **33.73%** of total products sold

ii) **Q3** witnessed least product sales with **10.01%** of total sold quantities

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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:

i) channel
ii) gross_sales_mln
iii) percentage

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

Insights:

Atliq Hardwares supplies its products to its customers through 3 channels Direct, through distribution and retailer.

i)   In FY21, among the 3 channels, the company received **73.22%** of total gross sales from **Retailer** channel

ii) **Distributor** channel with **11.31%** is least contributing channel

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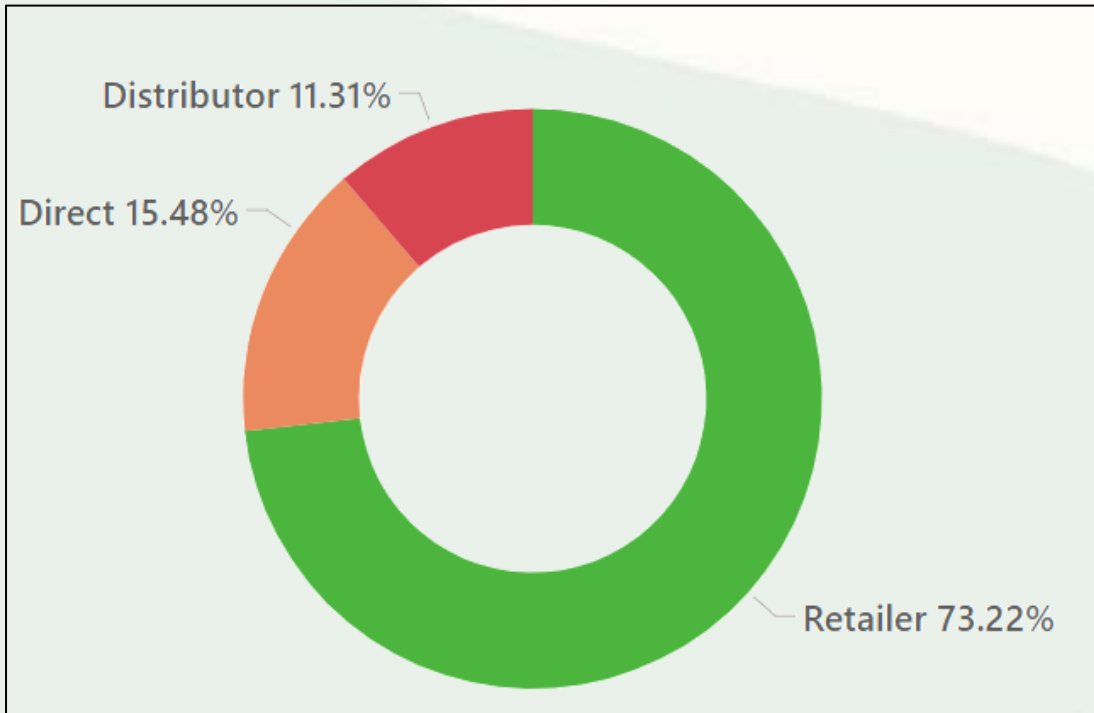
Request 10:

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:

i) division
ii) product_code
iii) product
iv) total_sold_quantity
v) rank_order

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

Insights:

i)   The top 3 most sold products of N&S division comes under **USB Flash Drives** category

ii)   The top 3 most sold products of P&A division comes under **Mouse** category

iii) The top 3 most sold products of PC division comes under **Personal Laptop** category

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THANK YOU!