



Consumer Goods Ad-hoc Insights

SQL Project

By

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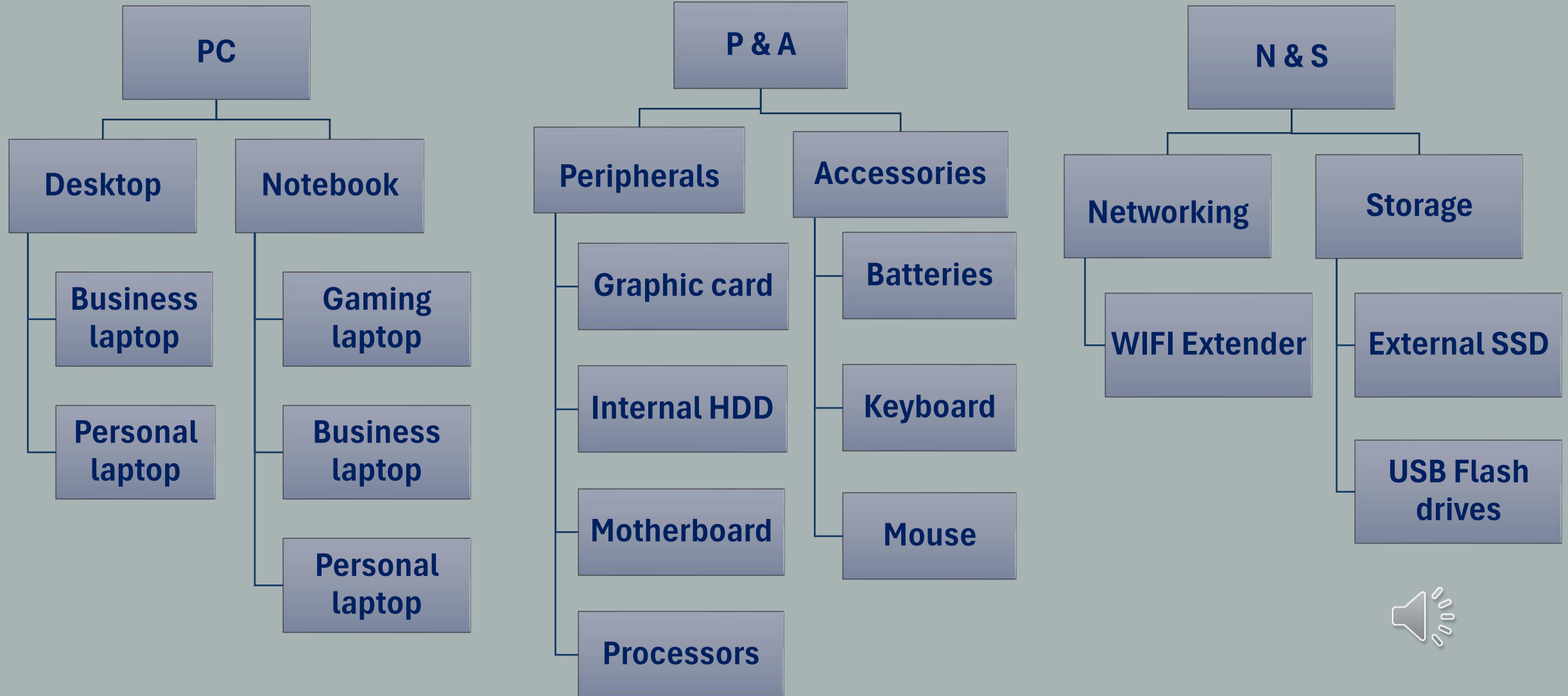


Project Overview

- AtliQ Hardware is one of the leading computer hardware producers in India and well expanded in other countries too.
- The management did not get enough insights to make quick and smart data-informed decisions. They want to expand their data analytics team.
- To assess the candidates, Tony Sharma, the data analytics director decided to conduct a SQL challenge to evaluate both technical and soft skills.
- The company needs insights on the 10 ad hoc requests.



AtliQ Products



AtliQ's Market

● APAC ● EU ● LATAM ● NA



Data Information

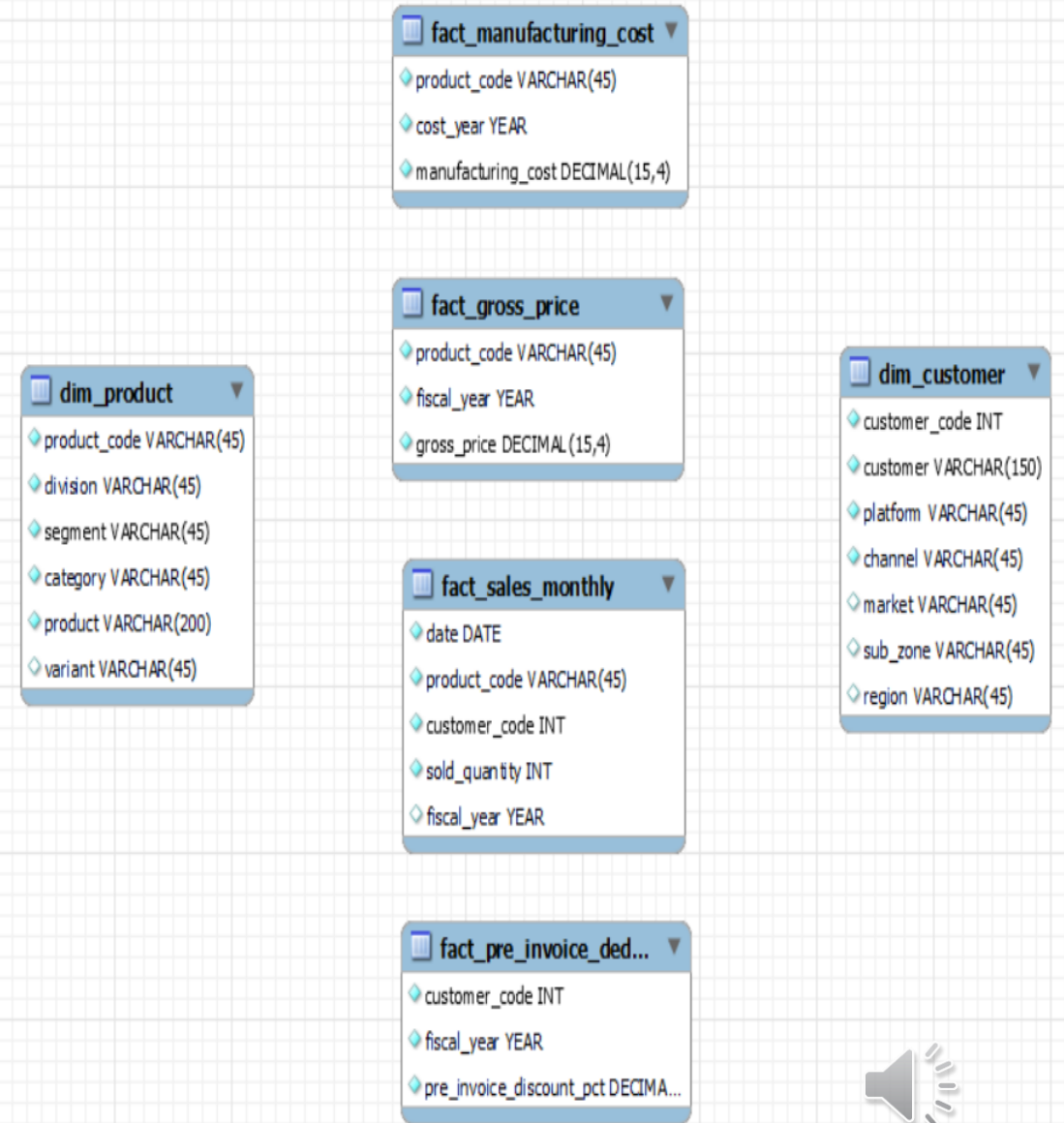
Input data consists of sales data for the FY 2020 and 2021. The companies Fiscal Year starts in September.

Fact Tables:

- Manufacturing Cost
- Gross Price
- Sales Monthly
- Pre Invoice Deductions

Dimension Tables:

- Customer
- Product



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

Atliq Exclusive's Market in APAC Region

● Australia ● Bangladesh ● India ● Indonesia ● Japan ● Newzealand ● Philiphines ● South Korea



Insights:

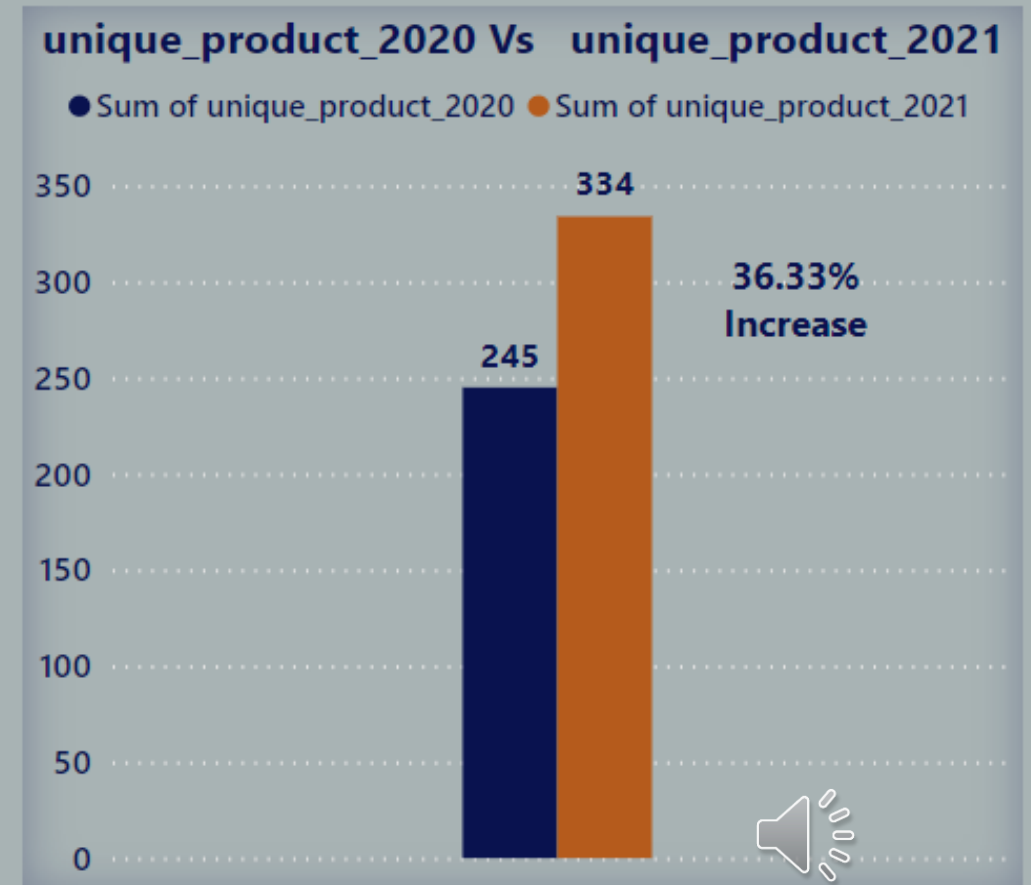
Atliq Exclusive operates its business in various markets across the APAC region, including Australia, Bangladesh, India, Indonesia, Japan, New Zealand, Philippines and South Korea.

Percentage of unique product increase in 2021 vs. 2020

unique_product_2020	unique_product_2021	percentage_chg
245	334	36.33%

Insights:

- The data shows a significant increase in the number of unique products from 2020 to 2021, with a growth of 36.33%
- Such a substantial increase reflects positive growth and potential market expansion for the company.



Provide a report with all the unique product counts for each segment

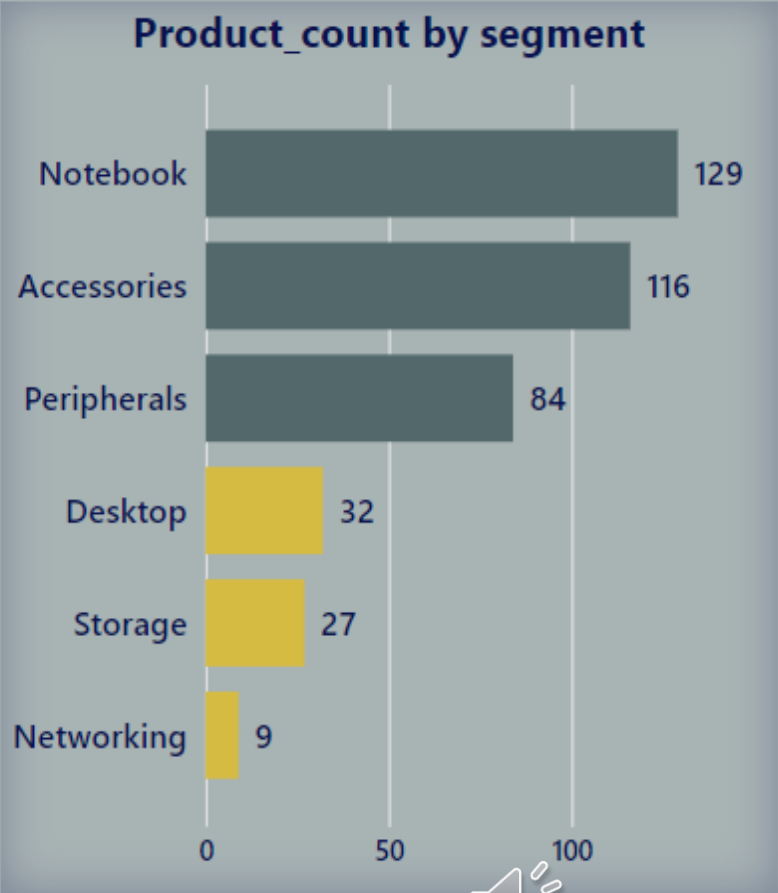
Insights:

Manufacturing growth in notebooks, accessories, and peripherals is significantly surpassing that of desktop, storage, and networking products.

Recommendation:

- Diversify storage solutions.
- Enhance networking offerings
- Bundle deals and promotions

segment	Sum of product_count
Storage	27
Peripherals	84
Notebook	129
Networking	9
Desktop	32
Accessories	116
Total	397



Segment that had the most increase in unique products in 2021 vs 2020

segment	product_count_2020	product_count_2021	difference
Notebook	92	108	16
Accessories	69	103	34
Peripherals	59	75	16
Storage	12	17	5
Desktop	7	22	15
Networking	6	9	3

segment	product_count_2020	product_count_2021	difference
Notebook	92	108	16 ↑
Accessories	69	103	34 ↑
Peripherals	59	75	16 ↑
Storage	12	17	5 ↑
Desktop	7	22	15 ↑
Networking	6	9	3 ↑

Insights:

- The data shows significant growth in the Accessories segment, with an increase of 34 unique products from 2020 to 2021.
- Notebook and Peripherals segments also saw steady growth, each adding 16 new products.
- Desktop products expanded notably by 15 units.
- Storage and Networking segments experienced more modest growth, with 5 and 3 additional products, respectively.



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

product_code	product	manufacturing_cost
A2118150101	AQ Master wired x1 Ms	\$0.89
A6120110206	AQ HOME Allin1 Gen 2	\$240.54



Product with Highest manufacturing cost

AQ Home Allin 1 Gen 2 - \$240.54

Desktop

Insight:

The product "AQ HOME Allin1 Gen 2" (Product Code: A6120110206) likely incorporates advanced features or components, considering its relatively high manufacturing cost of \$240.54.

"AQ Master wired x1 Ms" (Product Code: A2118150101) seems to be a simpler product, possibly reflecting its minimal manufacturing cost of \$0.89.



Product with Lowest manufacturing cost

AQ Master wired x1 Ms - \$0.89

Mouse

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.

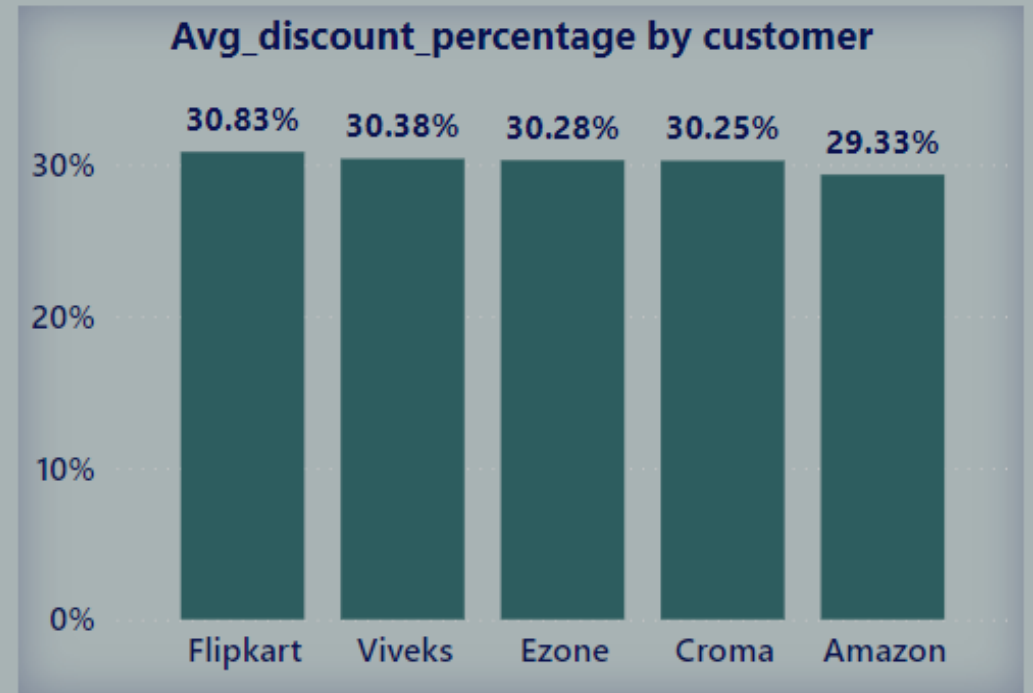
customer_code	customer	Avg_discount_percentage
90002002	Croma	30.25%
90002003	Ezone	30.28%
90002006	Viveks	30.38%
90002009	Flipkart	30.83%
90002016	Amazon	29.33%

Insights:

Flipkart offers the highest average discount percentage at 30.83%, followed closely by Viveks at 30.38%.

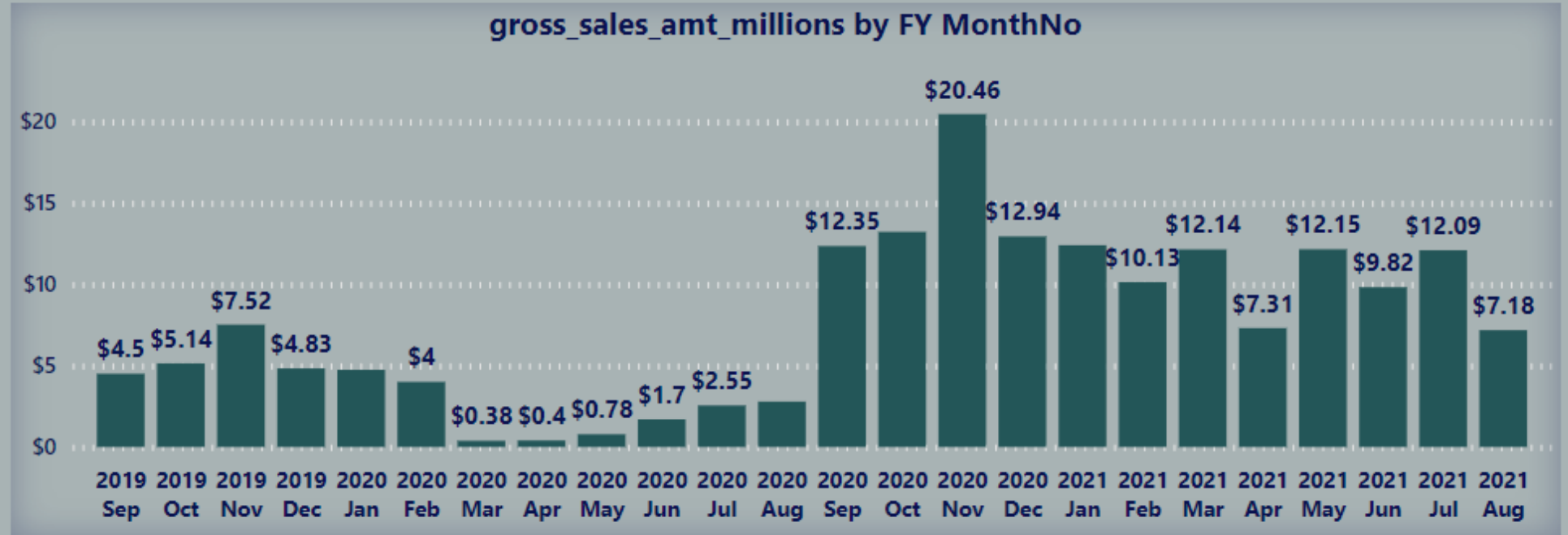
Ezone and Croma also maintain competitive averages at 30.28% and 30.25% respectively.

Amazon offers a slightly lower average discount of 29.33%.



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

FY Month	gross_sales_amt_millions
2019 Sep	\$4.5
2019 Oct	\$5.14
2019 Nov	\$7.52
2019 Dec	\$4.83
2020 Jan	\$4.74
2020 Feb	\$4
2020 Mar	\$0.38
2020 Apr	\$0.4
2020 May	\$0.78
2020 Jun	\$1.7
2020 Jul	\$2.55
2020 Aug	\$2.79
2020 Sep	\$12.35
2020 Oct	\$13.22
2020 Nov	\$20.46
2020 Dec	\$12.94
2021 Jan	\$12.4
2021 Feb	\$10.13
2021 Mar	\$12.14
2021 Apr	\$7.31
2021 May	\$12.15
2021 Jun	\$9.82
2021 Jul	\$12.09
2021 Aug	\$7.18



Insights:

- There's a notable increase in sales from September 2020 onwards, indicating a significant growth trend in the later fiscal year months.
- There appears to be a seasonal fluctuation pattern as sales peak in November and dip in the early months of each year.
- Sales gradually rise from April to July before stabilizing in August.



In which quarter of 2020, got the maximum total_sold_quantity?

Quarter	total_sold_quantity ▼
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

Insights:

- Q1 and Q2 demonstrate the highest total quantity sold.
- Q3 and Q4 exhibit comparatively lower total sold quantities.
- There is a clear fluctuation in the quantity sold across quarters, with Q1 and Q2 reflecting higher sales volumes compared to Q3 and Q4.



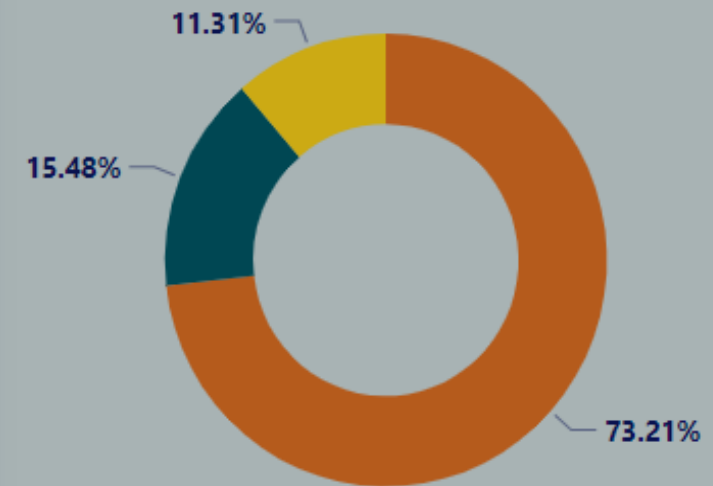
Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

channel	gross_sales_mln	percentage
Direct	406.69	15.48%
Distributor	297.18	11.31%
Retailer	1,924.17	73.22%

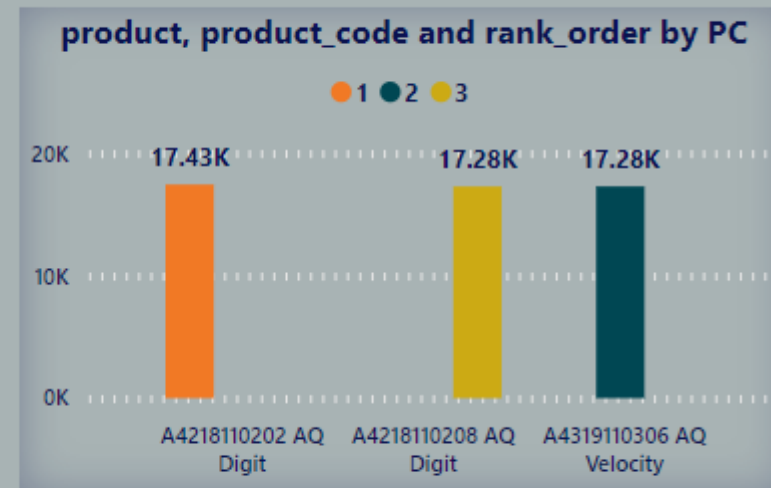
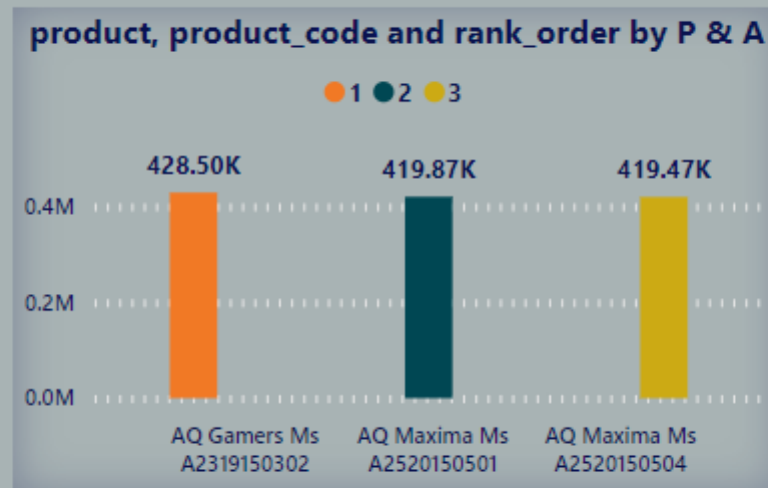
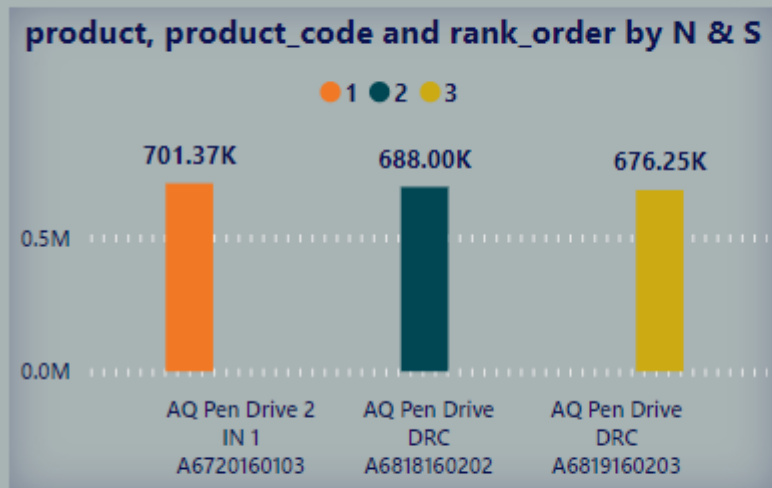
Insights:

- The Retailer channel accounts for the highest gross sales volume, representing 73.22% of total sales.
- Direct sales contribute a notable portion, representing 15.48% of total sales
- Distributors account for a smaller proportion of total sales at 11.31%

percentage by channel and gross_sales_mln



Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021



Insights:

- The AQ Pen Drive 2 IN 1 emerges as the best-selling product within the N & S division, followed closely by the AQ Pen Drive DRC models.
- In the P & A division, the AQ Gamers Ms and AQ Maxima Ms products lead in total sold quantity.
- Within the PC division, the AQ Digit and AQ Velocity products stand out as the top sellers.

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	A4218110208	AQ Digit	17235	3
PC	A4319110306	AQ Velocity	17280	2

Finally I thank Dhaval Patel and Hemanand Vadivel for creating this resume project challenge.

