# Atliq Hardware

Outline

- Atliq Hardware (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too.
- Nevertheless, the management noticed that they do not have sufficient insights to make prompt, wise and data informed decisions.
- Plan to expand their data analytics team by adding junior data analysts.
- To assess candidates, Data analytics director, Tony Sharma plans to conduct a SQL challenge to evaluate both tech and soft skills.
- The company seeks insights for 10 ad hoc requests.
- Tools : Used MySQL for ad hoc requests and Power BI for Level 1 Analysis to gain the better overall insights of all segments.

Data Model

Few additional calculated columns and calculative measures are created using DAX in Power BI
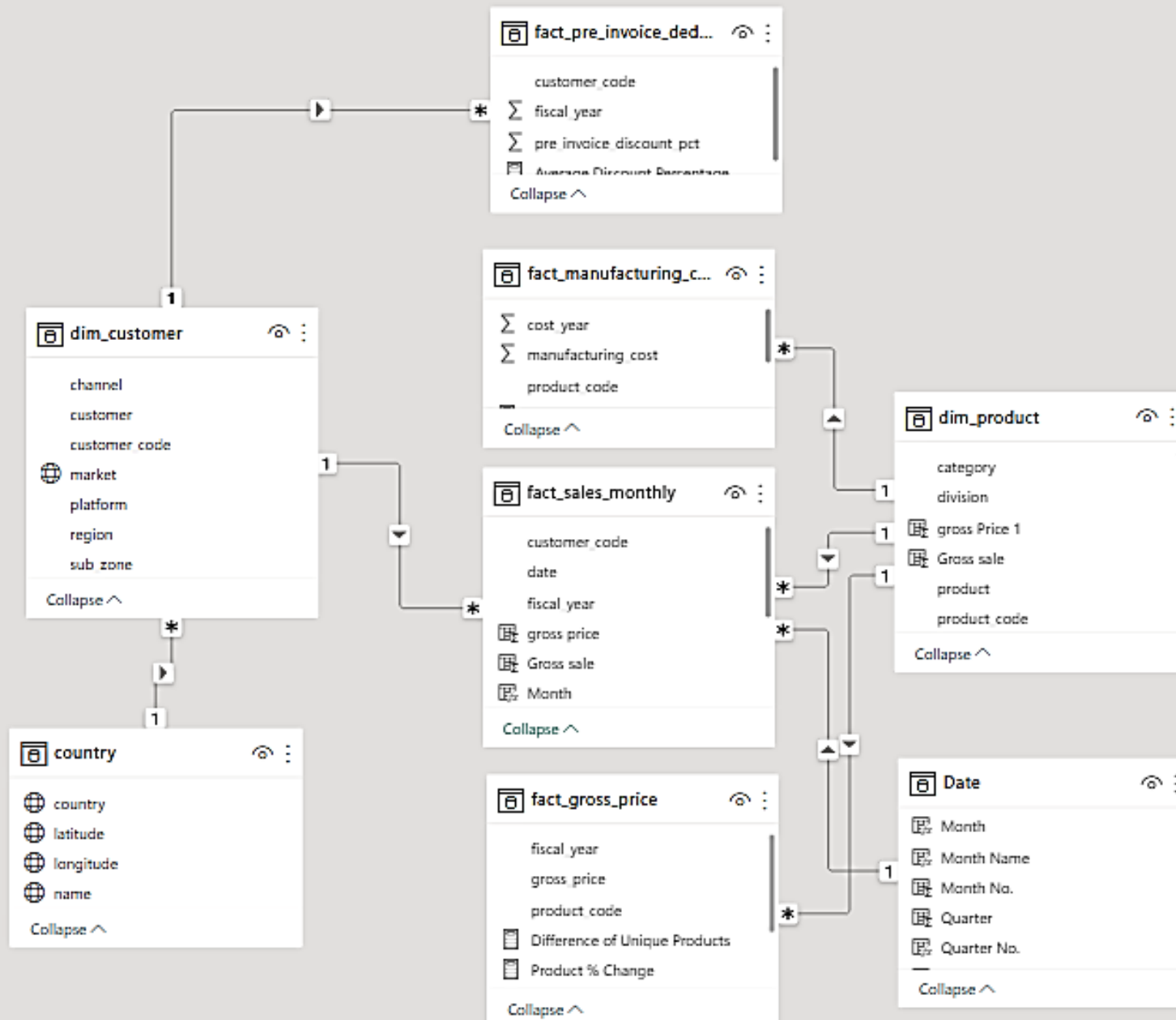
2. What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,

unique_products_2020
unique_products_2021
percentage_chg

unique_product_2020	unique_product_2021	Percentage_chng
245	334	36.33

Percentage
Change 36.33%

Unique Products in 2020 vs. 2021

334

300

245

200

100

0

2020   2021
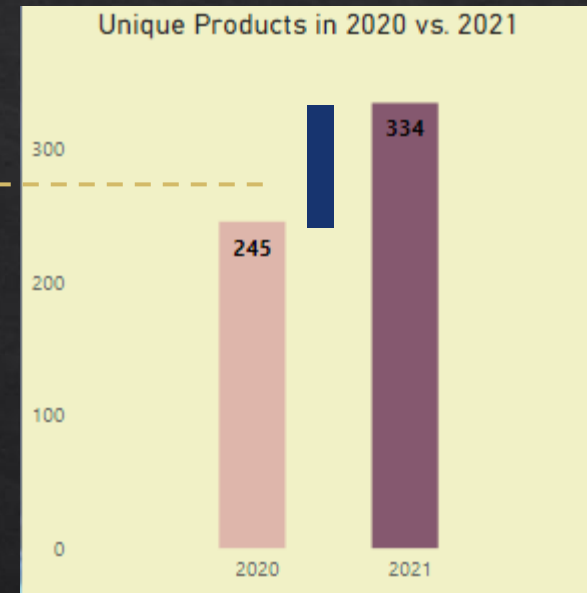
Insight:

In 2021 Demand of products have 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,

segment
product_count

Unique Product Count for each Segment

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

Insight:
Demand of these products are less,
Can be the Segments of future Growth
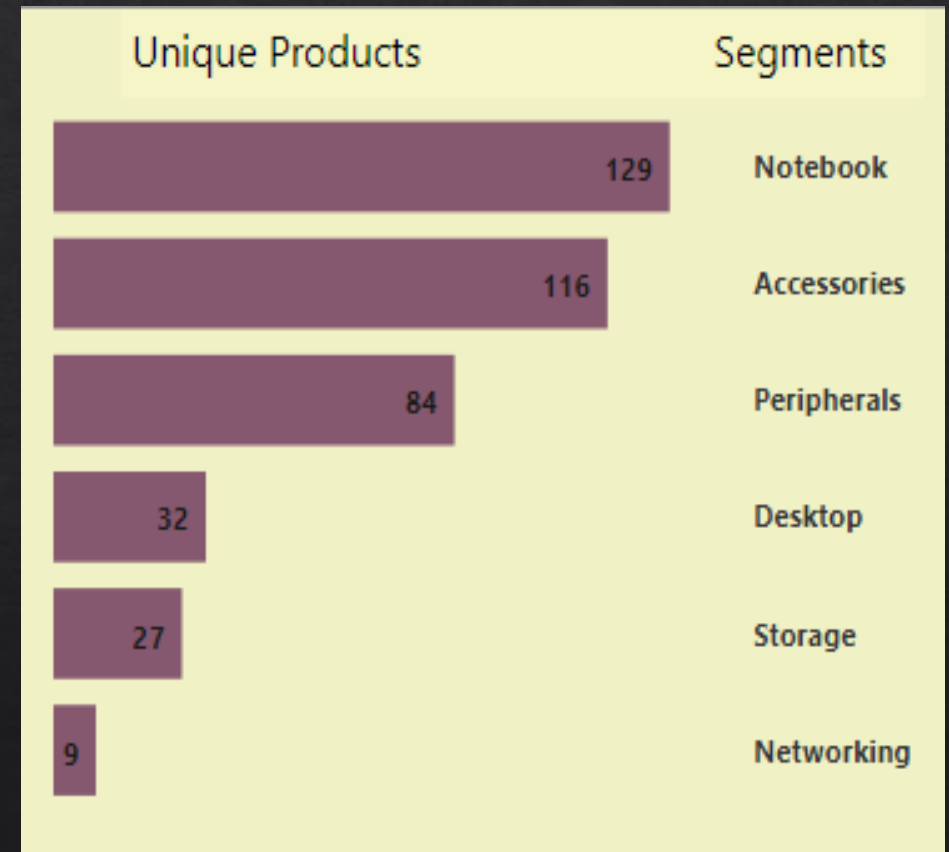
4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields,

segment
product_count_2020
product_count_2021
difference

Unique product difference per Segment from FY2020 to FY2021

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

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 ⬆

Insights :
- Accessories had the highest increase in Demand and Supply.
- Storage and Networking are experiencing slower 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	240.54
A2118150101	AQ Master wired x1 Ms	0.89

240.54
A6120110206
AQ HOME Allin1 Gen 2

Personal Desktop

0.89
A2118150101
AQ Master wired x1 Ms

Mouse

Product and Category

Insights :
- Mouse has the lowest manufacturing cost.
- Personal Desktop 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. The final output contains these fields,
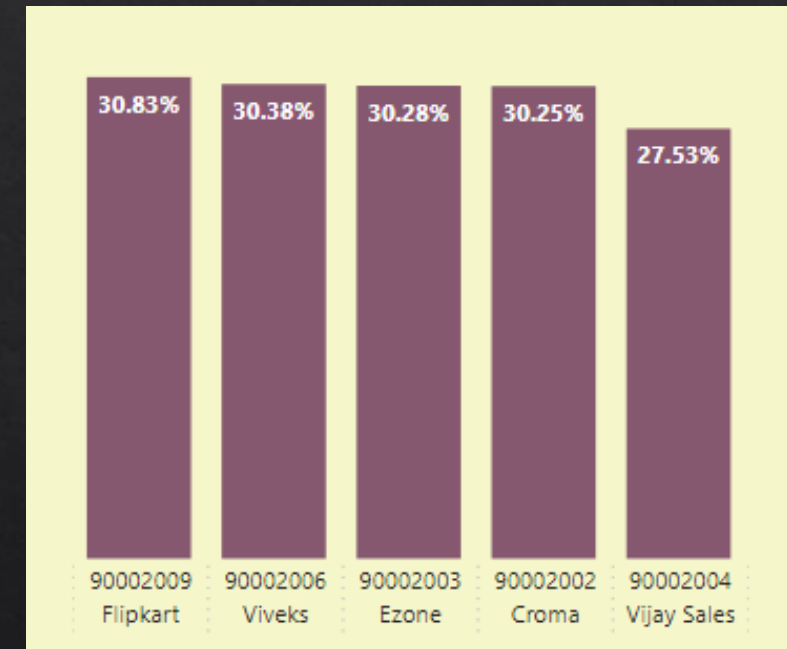
customer_code
customer
average_discount_percentage

Top 5 Indian Customers with highest average discount % for FY 2021

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

30.83%	30.38%	30.28%	30.25%	27.53%
90002009 Flipkart	90002006 Viveks	90002003 Ezone	90002002 Croma	90002004 Vijay Sales

Customer code and Customer

Insights:

- Flipkart got the highest average pre-invoice discount
- Amazon got the least average pre-invoice discount

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

| Year	Month	Gross_sale_amount
2020	1	9584951.94
2020	2	8083995.55
2020	3	766976.45
2020	4	800071.95
2020	5	1586964.48
2020	6	3429736.57
2020	7	5151815.40
2020	8	5638281.83
2020	9	9092670.34
2020	10	10378637.60
2020	11	15231894.97
2020	12	9755795.06
2021	1	19570701.71
2021	2	15986603.89
2021	3	19149624.92
2021	4	11483530.30
2021	5	19204309.41
2021	6	15457579.66
2021	7	19044968.82
2021	8	11324548.34
2021	9	19530271.30
2021	10	21016218.21
2021	11	32247289.79
2021	12	20409063.18

FY 2020
79.5 M

FY 2020 : September 2019 – August 2020

FY 2021
224.4 M

FY 2021 : September 2020 – August 2021
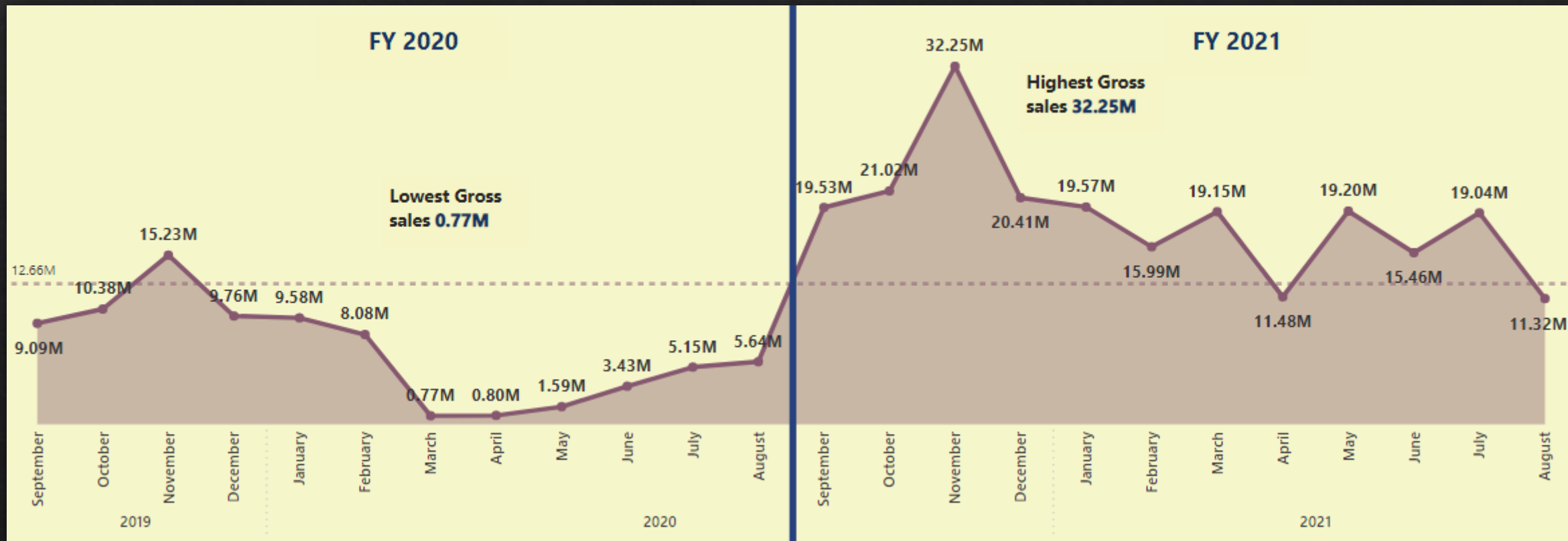
Insights :
- Lowest Sale happened in March 2020 and Highest Sale happened in November 2021.
- Sale started increasing from the Start of the FY 2021.

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

Quarter	Total_sold_quantity
1	7005619
2	6649642
4	5042541
3	2075087

Total Sold Quantity in FY2020

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

Insights :
- In Quarter 1 highest products have sold, while in Quarter 3 least products have sold in FY 2020.
- Quarter 1 account the 34.4% of the total sold quantity in FY 2020.
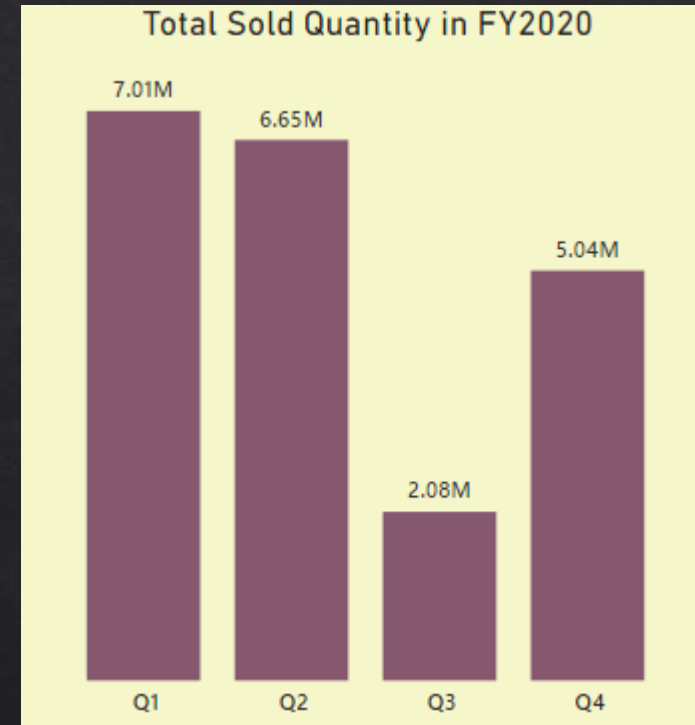
9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields,
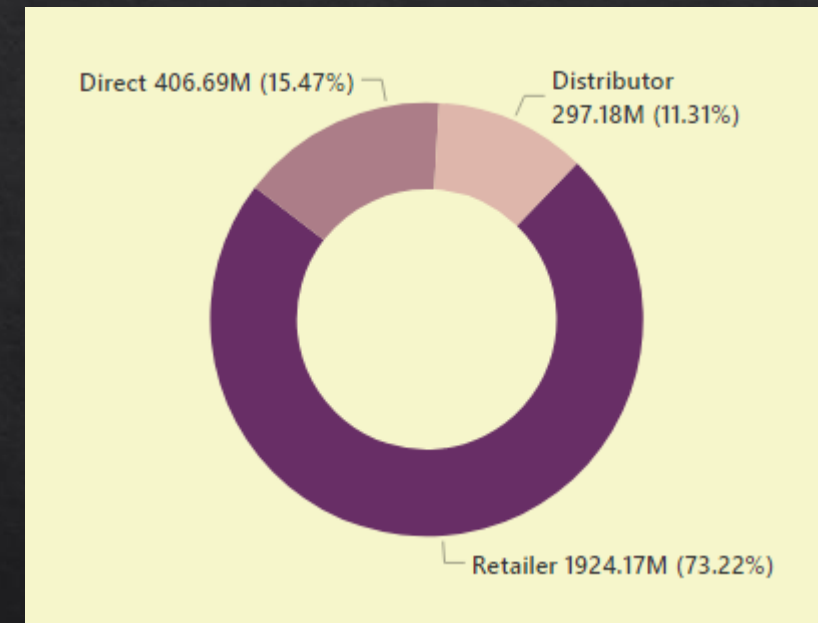
channel
gross_sales_mln
percentage

Contribution % and Gross Sale by Channels in FY 2021

Channel	Gross_sales_in_Million	Percentage
Retailer	1924.17M	73.22 %
Direct	406.69M	15.48 %
Distributor	297.18M	11.31 %

Insight :
Retailers are bringing the Maximum sale while Distributors are bringing the Least sale to the company.

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,

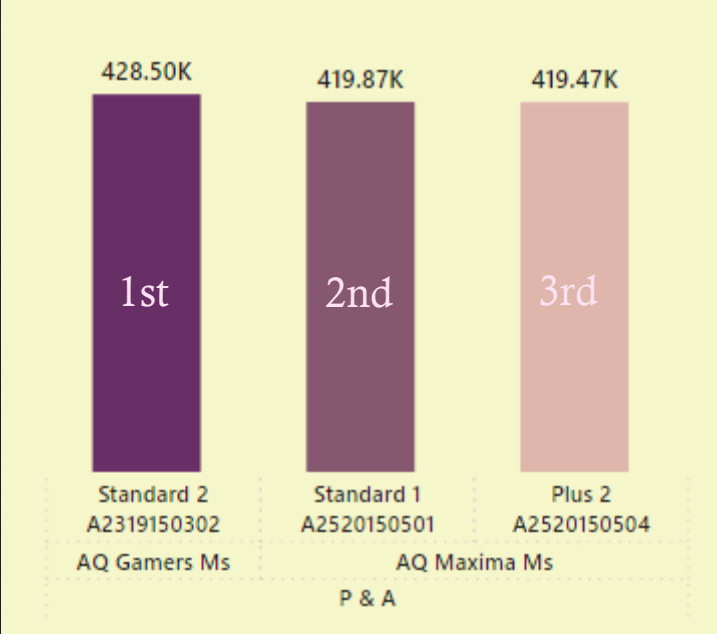division
product_code
Product
total_sold_quantity
rank_order

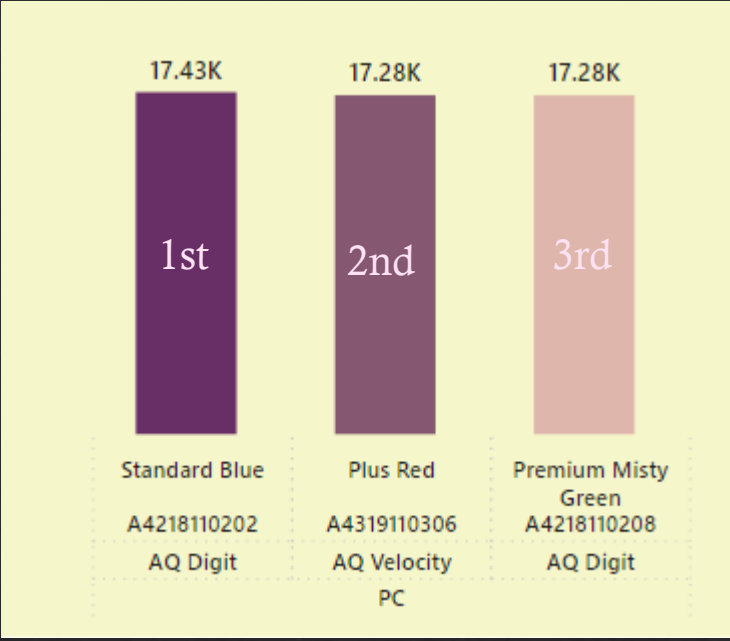| division	product_code	product	Total_sold_quantity	Rank_Order
N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
N & S	A6818160202	AQ Pen Drive DRC	688003	2
N & S	A6819160203	AQ Pen Drive DRC	676245	3
P & A	A2319150302	AQ Gamers Ms	428498	1
P & A	A2520150501	AQ Maxima Ms	419865	2
P & A	A2520150504	AQ Maxima Ms	419471	3
PC	A4218110202	AQ Digit	17434	1
PC	A4319110306	AQ Velocity	17280	2
PC	A4218110208	AQ Digit	17275	3

Insights :
- In Division N&S's products are selling more than the other Two Divisions.
- Same Product with different Product code are appearing more than once in Top 3 products sold.
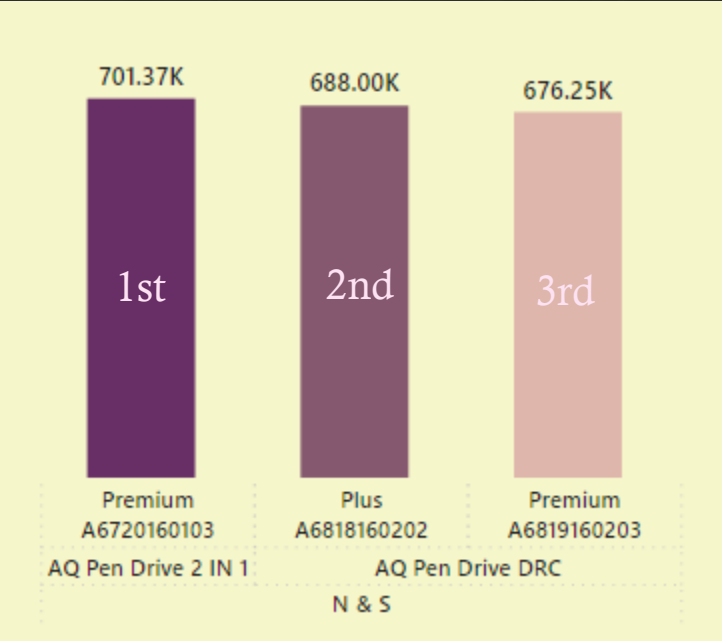
Division N & S

Division P & A

Division PC