Consumer Goods Ad Hoc Insights

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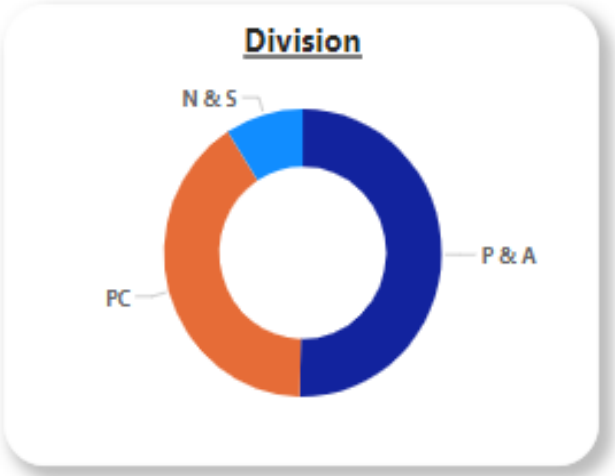
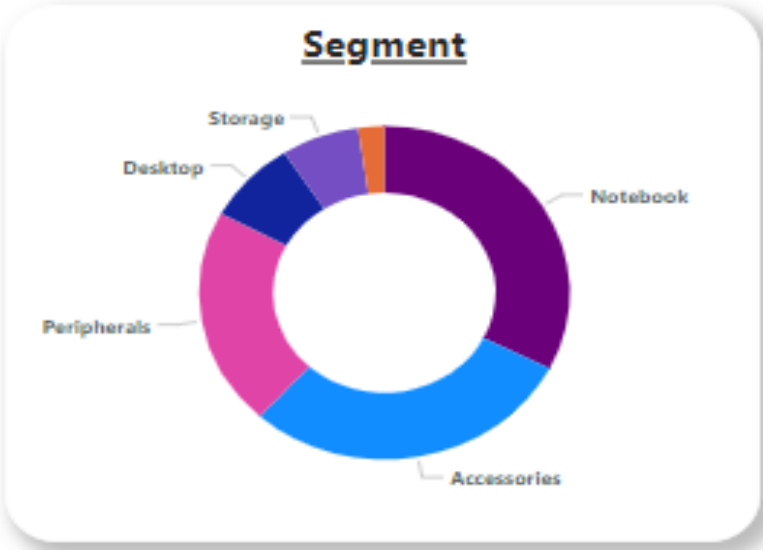
Introduction

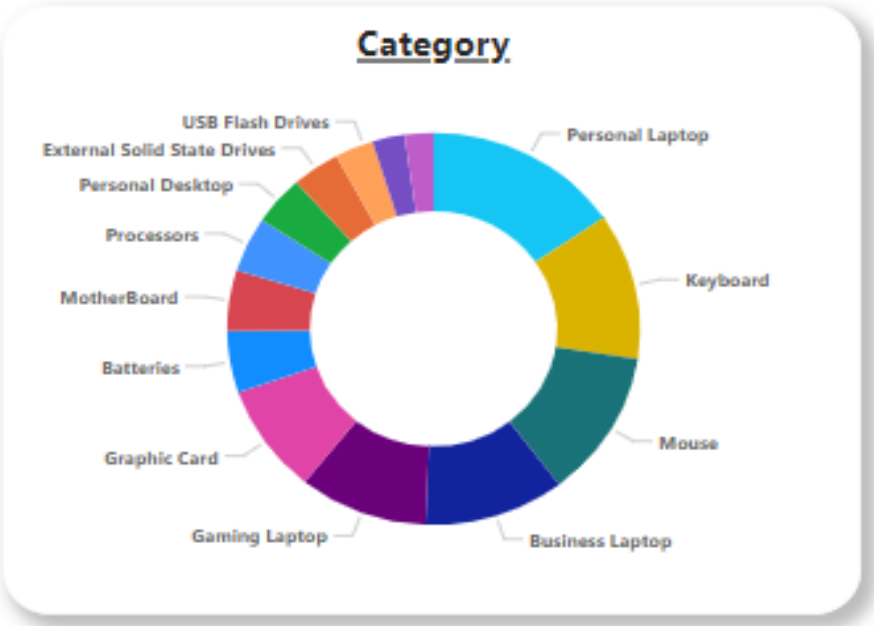
About Company

Atliq Hardware is a prominent computer hardware producer based in India, holding a leading position not only in Indian market but also in various other countries.

27
Total Countries







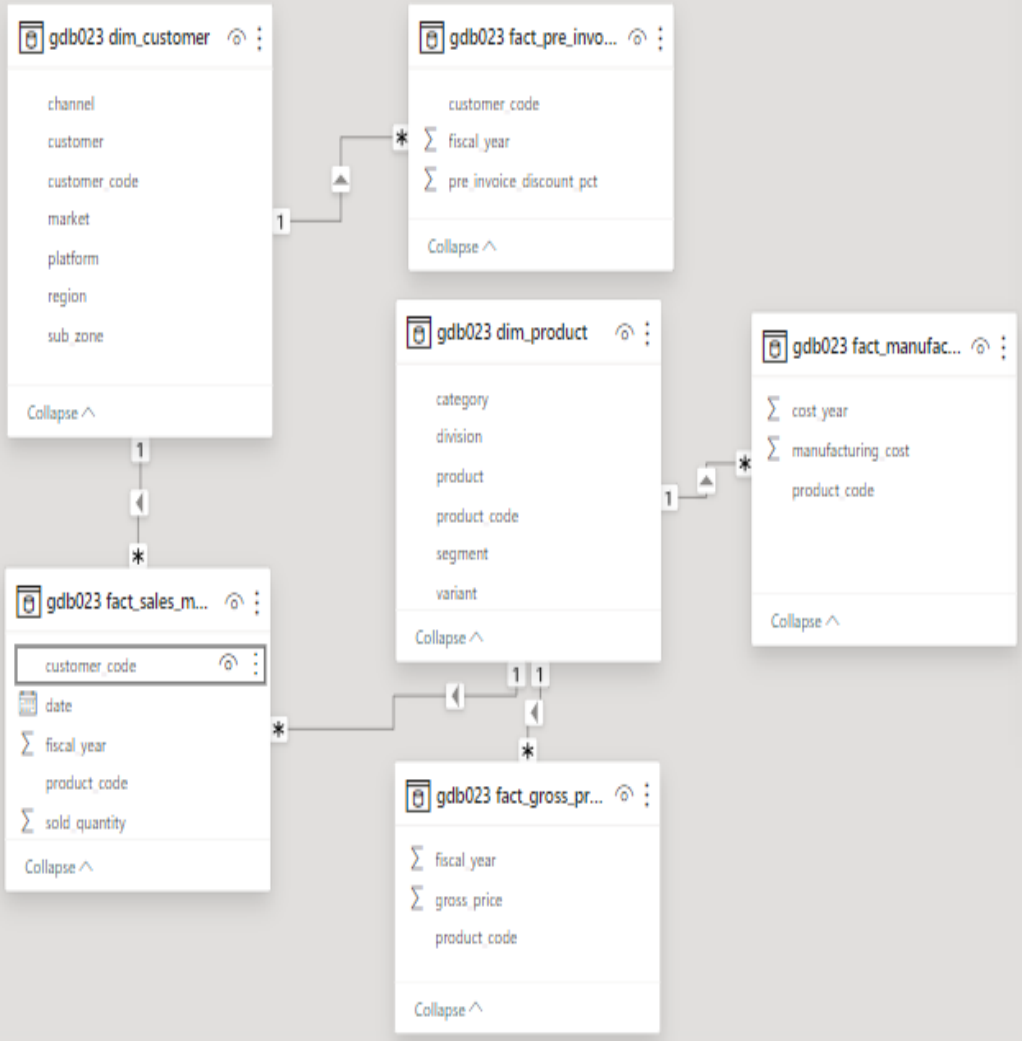
Objective

•**Identifying Market Opportunities:** Utilize SQL analysis to uncover emerging market trends and customer demands, providing actionable insights to capitalize on new opportunities and stay ahead of competitors.

•**Tracking Product Growth and Sales Performance:** Analyze product performance and growth over time, along with evaluating sales performance by region and channel, to understand key drivers of success and areas needing improvement.

•**Analyzing Customer Discounts and Manufacturing Costs:** Examine the impact of customer discounts on sales and profitability, while also assessing manufacturing costs to identify areas for cost reduction and operational efficiency improvements.

Data Model & Requests



Requests:

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

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

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

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

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

Ad hoc Task

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

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

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

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

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

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

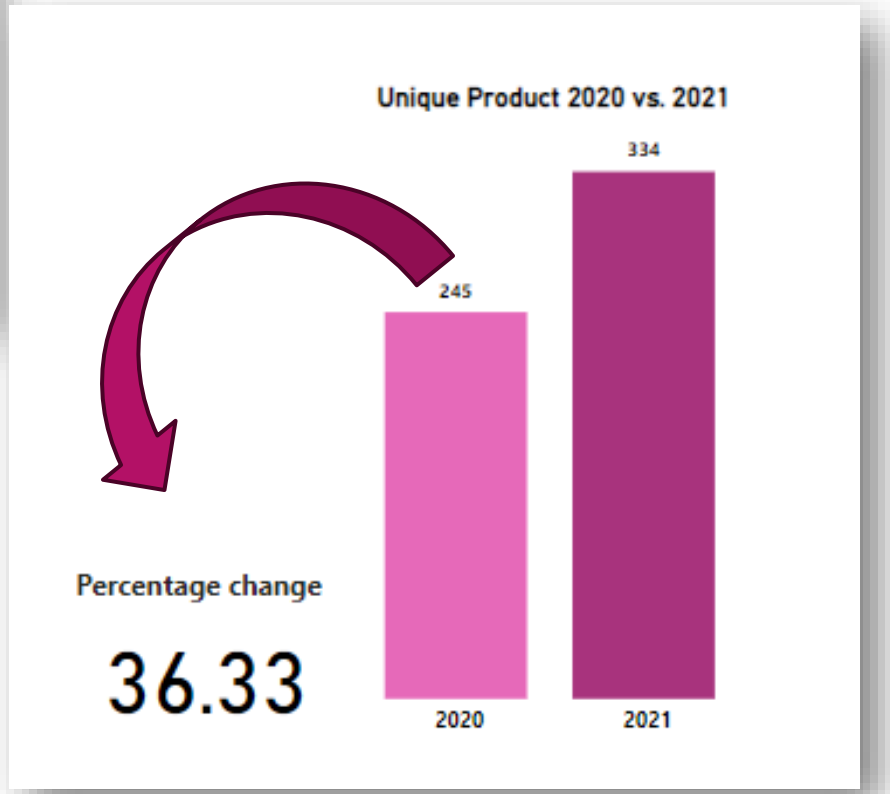
```
Select distinct market from dim_customer
where customer = 'Atliq Exclusive'
and region = 'APAC';
```

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Request 2:
What is the percentage of unique product increase in 2021 vs. 2020?

```sql
with t1 as
(Select count(distinct product_code) as unique_product_2020
from fact_sales_monthly
where fiscal_year = 2020),
t2 as
(Select count(distinct product_code) as unique_product_2021
from fact_sales_monthly
where fiscal_year = 2021)
Select t1.unique_product_2020,
       t2.unique_product_2021,
       round(((t2.unique_product_2021 - t1.unique_product_2020)/ t1.unique_product_2020)*100,2) as percentage_chg
       from t1,t2;
```

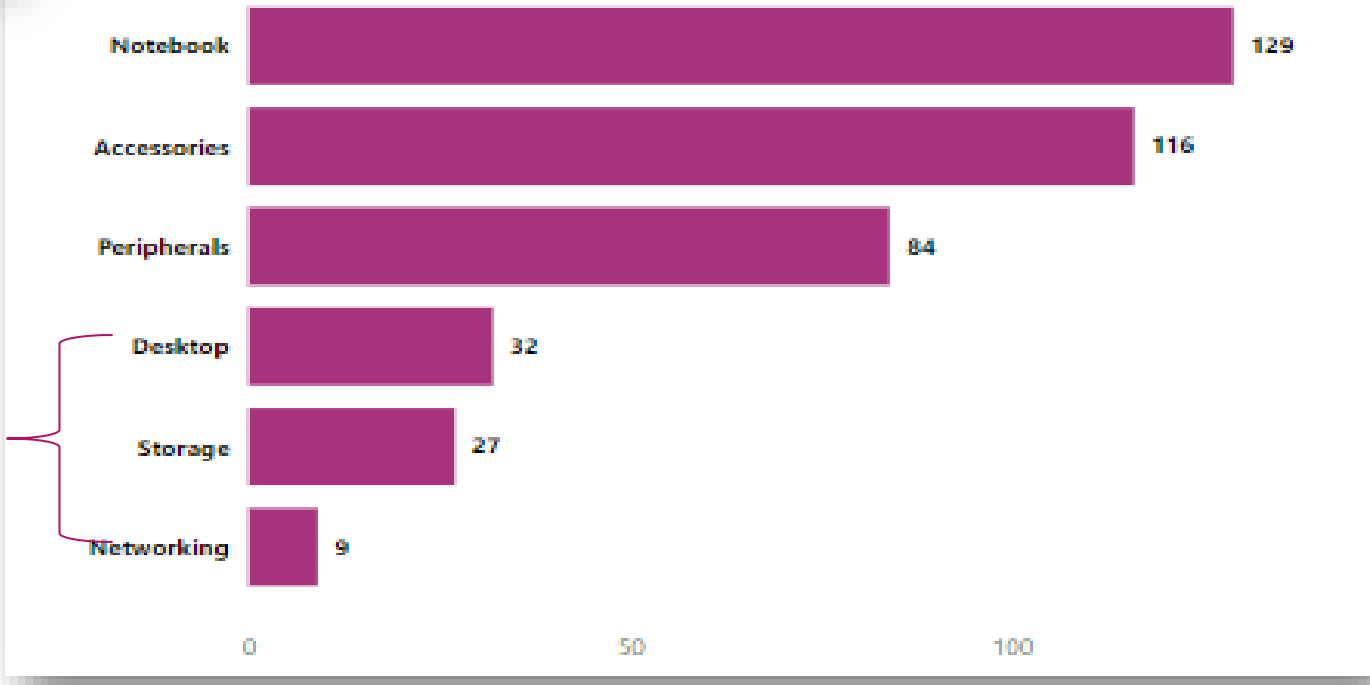
unique_product_2020	unique_product_2021	percentage_chg
245	334	36.33



Request 3:
Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

```sql
Select segment,
       count(distinct product_code) as product_count
from dim_product
group by segment
order by product_count desc;
```

segment	product_count
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?

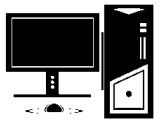
```sql
with t1 as (Select dp.segment,
        dp.product_code,
        fgp.fiscal_year
        from dim_product dp
        join fact_gross_price fgp on dp.product_code = fgp.product_code),
t2 as (Select segment,
        count(distinct product_code) as product_count_2020
        from t1
        where fiscal_year = 2020
        group by segment),
t3 as (Select segment, count(distinct product_code) as product_count_2021
        from t1
        where fiscal_year = 2021
        group by segment)
Select t2.segment,
        t2.product_count_2020,
        t3.product_count_2021,
        (t3.product_count_2021-t2.product_count_2020) as difference
from t2
join t3 on t2.segment = t3.segment
group by segment
order by difference desc;
```

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.

```sql
Select dp.product_code,
       dp.product,
       fmc.manufacturing_cost
from dim_product dp
join fact_manufacturing_cost fmc on dp.product_code = fmc.product_code
where manufacturing_cost in
            (Select max(manufacturing_cost) from fact_manufacturing_cost
            union
            Select min(manufacturing_cost) from fact_manufacturing_cost)
order by manufacturing_cost desc;
```

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



240.53

A6120110206

Personal Desktop

0.89

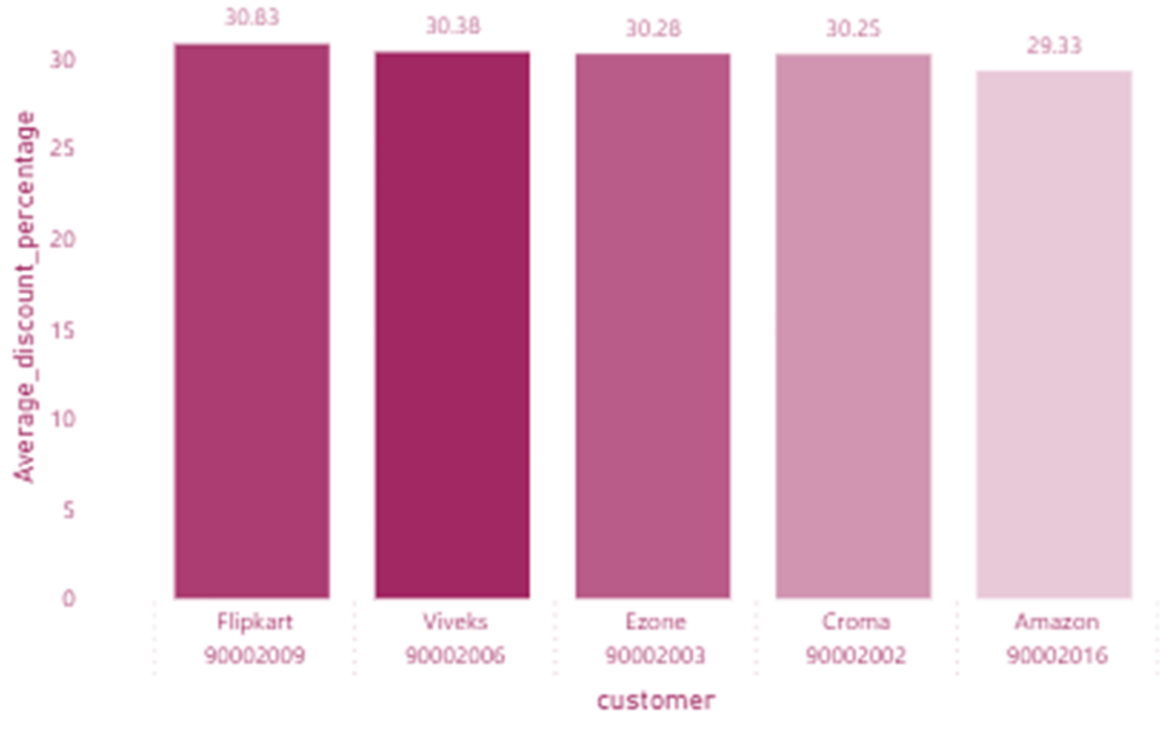
A2118150101

Mouse

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.

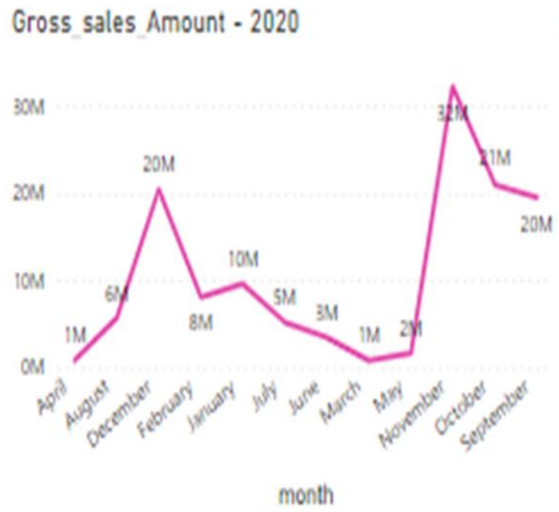
```sql
Select dp.customer_code,
       dp.customer, round(avg(fp.pre_invoice_discount_pct)*100,2) as average_discount_percentage
       from dim_customer dp
join fact_pre_invoice_deductions fp on dp.customer_code = fp.customer_code
where market = 'India' and fiscal_year = 2021
group by customer_code
order by average_discount_percentage desc
limit 5;
```

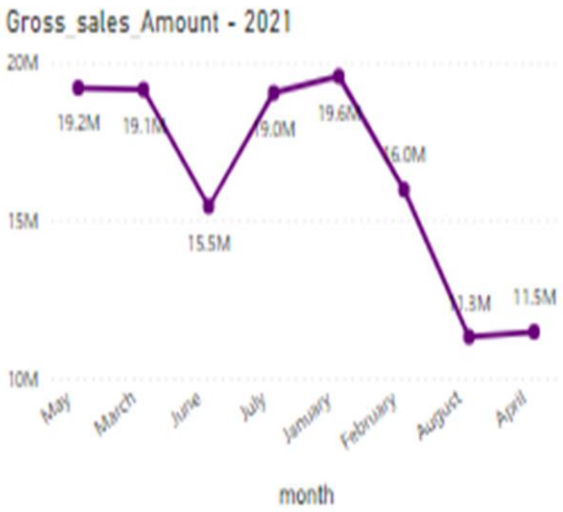
customer_code	customer	average_discount_percentage
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33



Request 7:
Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month.

```
Select monthname(fsm.date) as month,
       year(fsm.date) as year,
       sum(fgp.gross_price*fsm.sold_quantity) as Gross_sales_Amount
from fact_sales_monthly fsm
join fact_gross_price as fgp on fsm.product_code = fgp.product_code
join dim_customer dc on fsm.customer_code = dc.customer_code
where customer = 'Atliq Exclusive'
group by month,year
order by year;
```



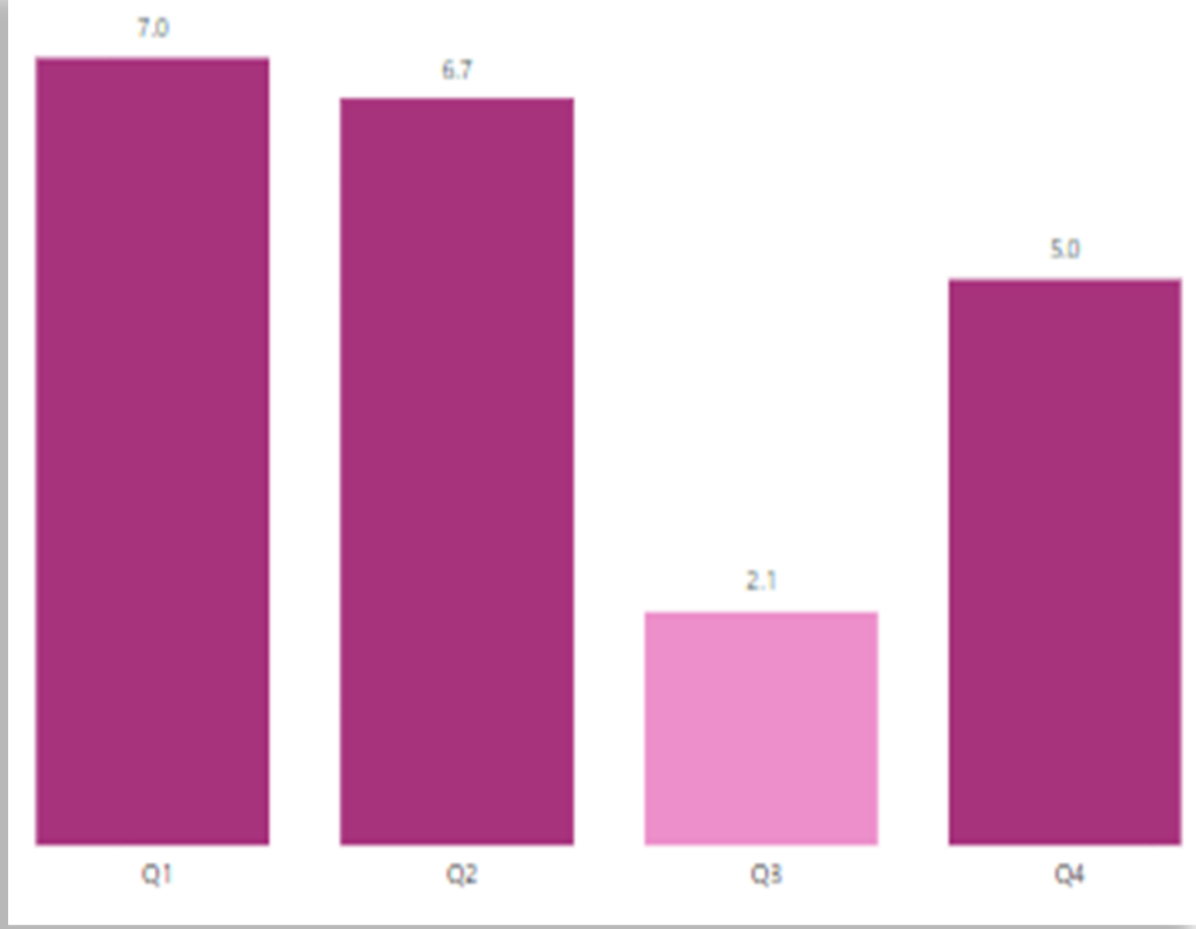


month	year	Sum of Gross_sales_Amount
December	2019	9,755,795.06
November	2019	15,231,894.97
October	2019	10,378,637.60
September	2019	9,092,670.34
April	2020	800,071.95
August	2020	5,638,281.83
December	2020	20,409,063.18
February	2020	8,083,995.55
January	2020	9,584,951.94
July	2020	5,151,815.40
June	2020	3,429,736.57
March	2020	766,976.45
May	2020	1,586,964.48
November	2020	32,247,289.79
October	2020	21,016,218.21
September	2020	19,530,271.30
April	2021	11,483,530.30
August	2021	11,324,548.34
February	2021	15,986,603.89
January	2021	19,570,701.71
Total		**303,926,501.67**

Request 8:
In which quarter of 2020, got the maximum total_sold_quantity?

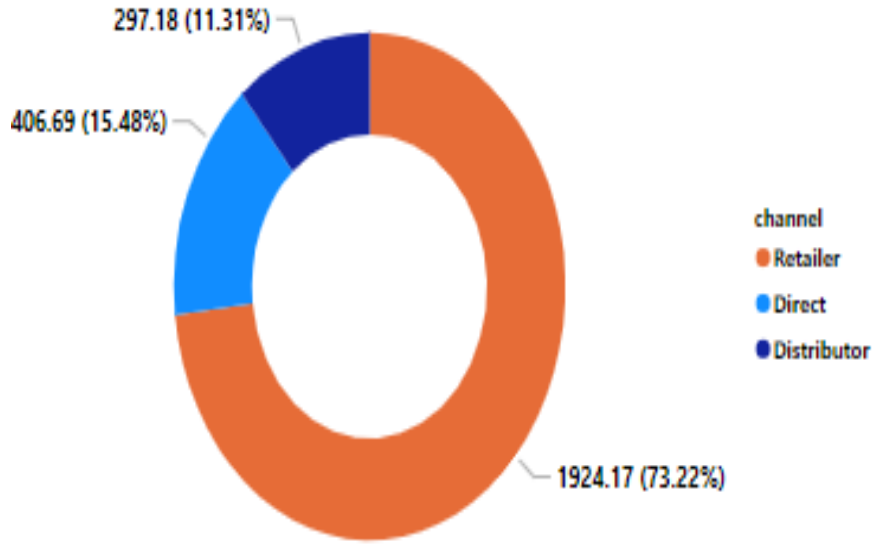
```sql
SELECT
 case
    when month(date) in ( 9,10,11) then "Q1"
    when month(date) in (12,1,2) then "Q2"
    when month(date) in (3,4,5) then "Q3"
    when month(date) in (6,7,8) then "Q4"
    end as Quarter,
    round(sum(sold_quantity)/1000000,2) as total_sold_quantity_mln
from fact_sales_monthly
where fiscal_year=2020
group by Quarter;
```

Quarter	total_sold_quantity_mln
Q1	7.01
Q2	6.65
Q3	2.08
Q4	5.04



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

```sql
with t as
(Select dc.channel,
        round(sum(fcm.sold_quantity*g.gross_price)/1000000,2) as gross_sales_mln
from dim_customer dc
join fact_sales_monthly fcm on dc.customer_code = fcm.customer_code
join  fact_gross_price g on fcm.product_code=g.product_code
where fcm.fiscal_year = 2021
group by channel),
t1 as
(Select sum(gross_sales_mln) as total_sales from t)
Select t.channel, t.gross_sales_mln,round((t.gross_sales_mln/t1.total_Sales)*100,2) as per from t, t1
group by channel
order by per desc;
```

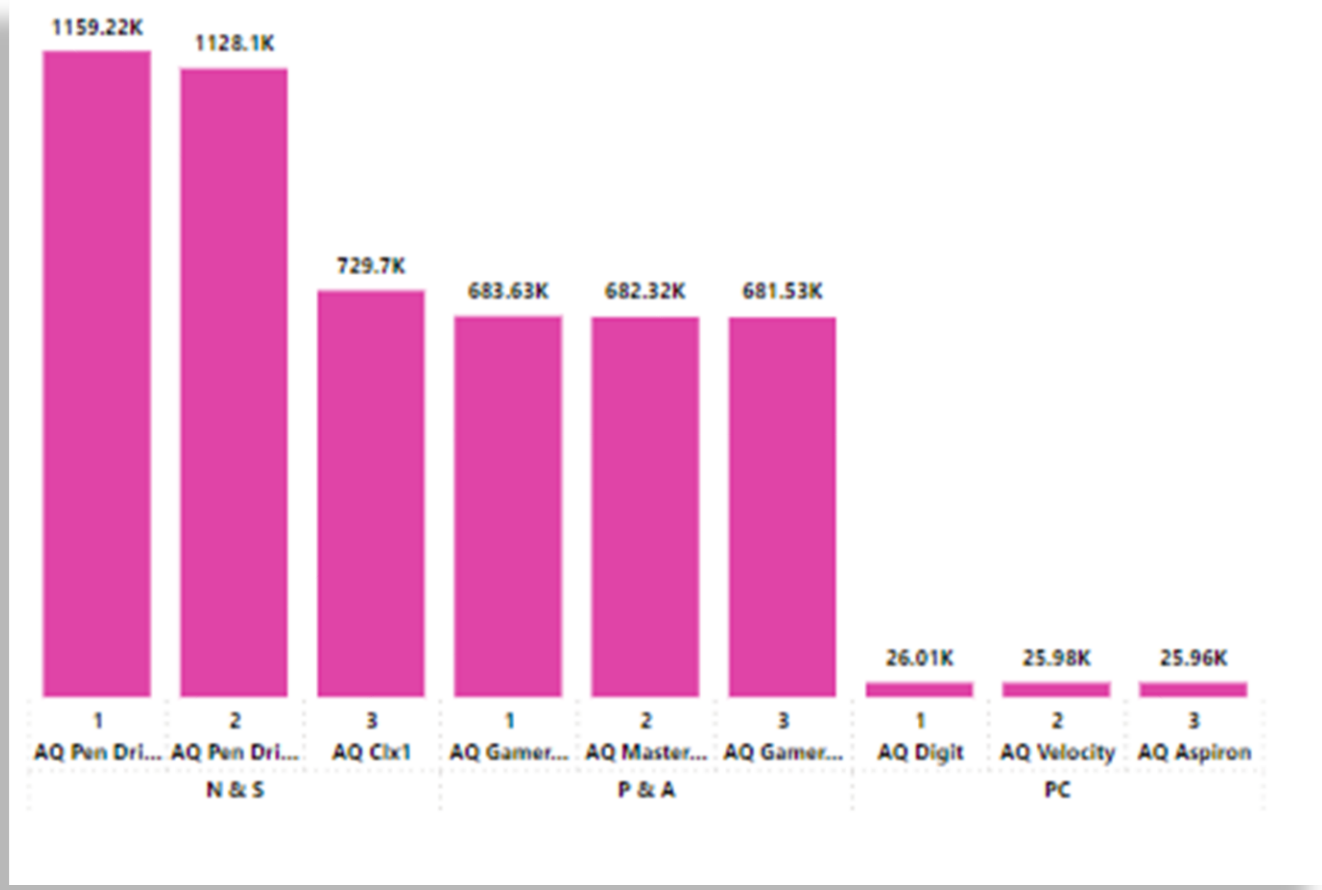


channel	gross_sales_mln	per
Retailer	1924.17	73.22
Direct	406.69	15.48
Distributor	297.18	11.31

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

```
with t as (Select dp.division, dp.product_code, dp.product,
sum(fsm.sold_quantity) as total_sold_quantity,
rank() over(partition by division order by sum(sold_quantity) desc) as rank_order
from dim_product dp
join fact_sales_monthly fsm on dp.product_code = fsm.product_code
group by division,product_code)
Select division, product_code, product, total_sold_quantity,rank_order
from t
where rank_order < 4;
```

division	product_code	product	total_sold_quantity	rank_order
N & S	A6720160103	AQ Pen Drive 2 IN 1	1159222	1
N & S	A6818160201	AQ Pen Drive DRC	1128104	2
N & S	A6419160301	AQ Clx1	729696	3
P & A	A2319150302	AQ Gamers Ms	683634	1
P & A	A2219150204	AQ Master wireless x1 Ms	682321	2
P & A	A2319150306	AQ Gamers Ms	681531	3
PC	A4218110202	AQ Digit	26012	1
PC	A4319110306	AQ Velocity	25978	2
PC	A4118110107	AQ Aspiron	25963	3



Summary and Insights

1. The Top selling product is **Notebook** and **Networking** line product shows the lowest sales.

2. Our unique product experienced a remarkable **36.33**% growth in sales during the fiscal year **2021** as compared to the previous year.

3. Among our product Manufacturing costs, **Desktops** have the highest expenditure, where as **Mouse** production cost are the lowest.

4. During FY2021, **Flipkart** made the highest customer contribution with an impressive **30.83%**, whereas **Amazon's** customer contribution is the lowest, with a figure of **29.33**.

5. In **March 2020**, which was the lowest sales period, we achieved sales of **0.77** million units where as **November 2020** was the highest sales period with sales of **32.27** million units.

Thank You