Customer Goods Ad hoc Insights

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Content

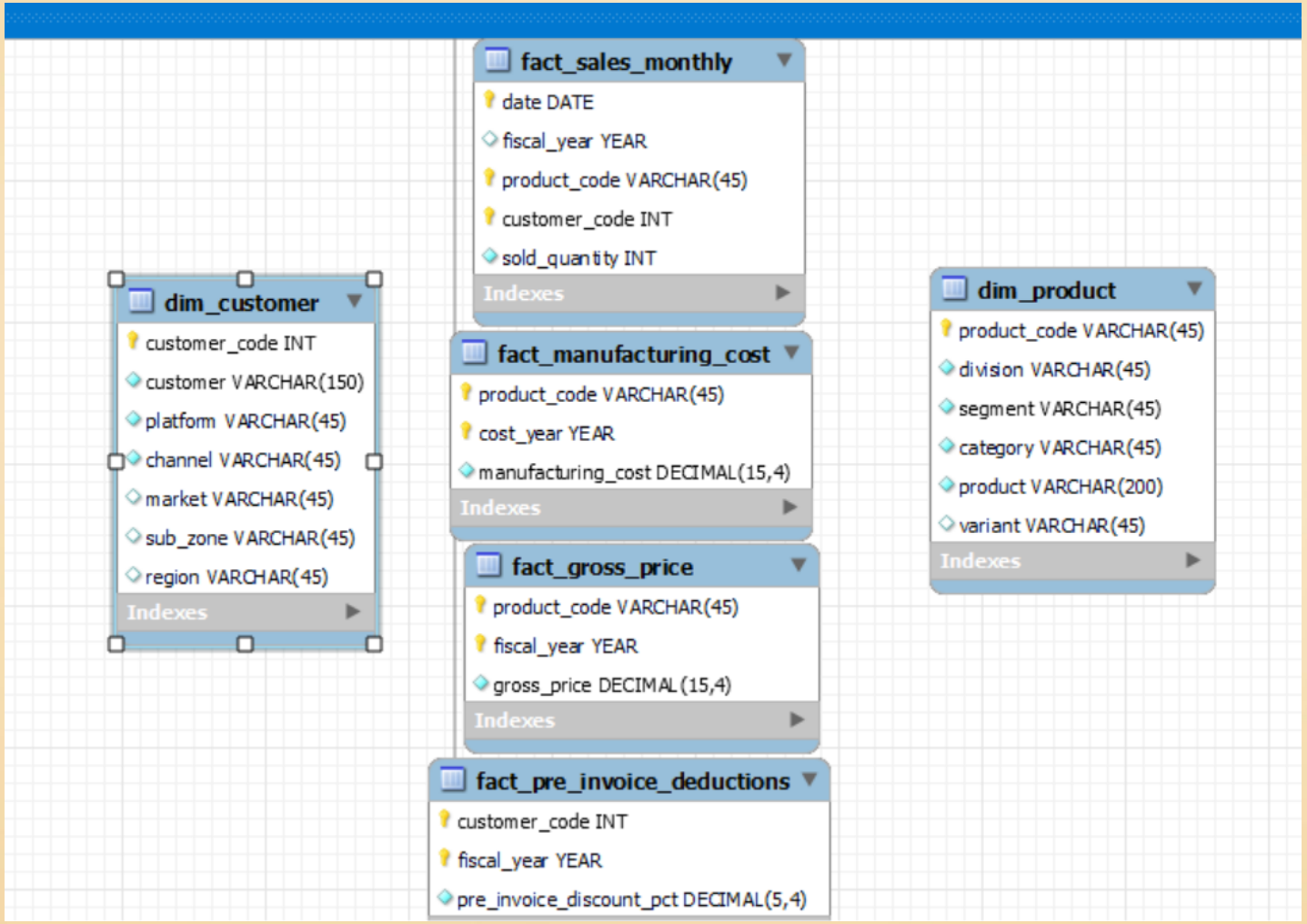
- Overview of Company
- Company Market and Data
- Ad Hoc request , query & output
- Visualization and Insights

Atliq Hardware

- Company Overview
  - Atliq Hardware is a leading computer hardware producer in India as well as 26 other countries globe.
  - Manufactures Products under 3 major Divisions i.e., Peripherals and Accessories PC, Networking and Storage.

- Objective
  - Assist the management team to gain more insights about the business.
  - Take data driven decisions to scale business.

About Data


fact_sales_monthly
date DATE
fiscal_year YEAR
product_code VARCHAR(45)
customer_code INT
sold_quantity INT
Indexes
dim_customer
customer_code INT
customer VARCHAR(150)
platform VARCHAR(45)
channel VARCHAR(45)
market VARCHAR(45)
sub_zone VARCHAR(45)
region VARCHAR(45)
Indexes
fact_manufacturing_cost
product_code VARCHAR(45)
cost_year YEAR
manufacturing_cost DECIMAL(15,4)
Indexes
dim_product
product_code VARCHAR(45)
division VARCHAR(45)
segment VARCHAR(45)
category VARCHAR(45)
product VARCHAR(200)
variant VARCHAR(45)
Indexes
fact_gross_price
product_code VARCHAR(45)
fiscal_year YEAR
gross_price DECIMAL(15,4)
Indexes
fact_pre_invoice_deductions
customer_code INT
fiscal_year YEAR
pre_invoice_discount_pct DECIMAL(5,4)

Atiliq Market

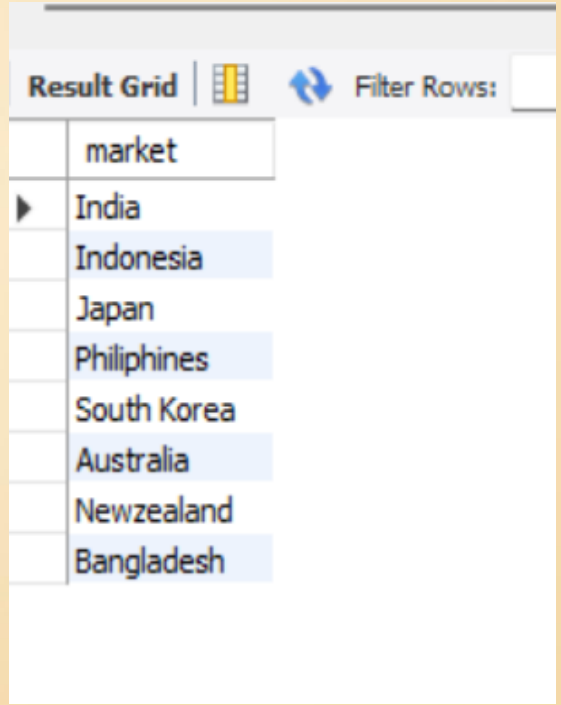
Request | Query| Output

Request1 : Provide the list of markets in which customer “Atliq Exclusive” operates its business in the APAC region.

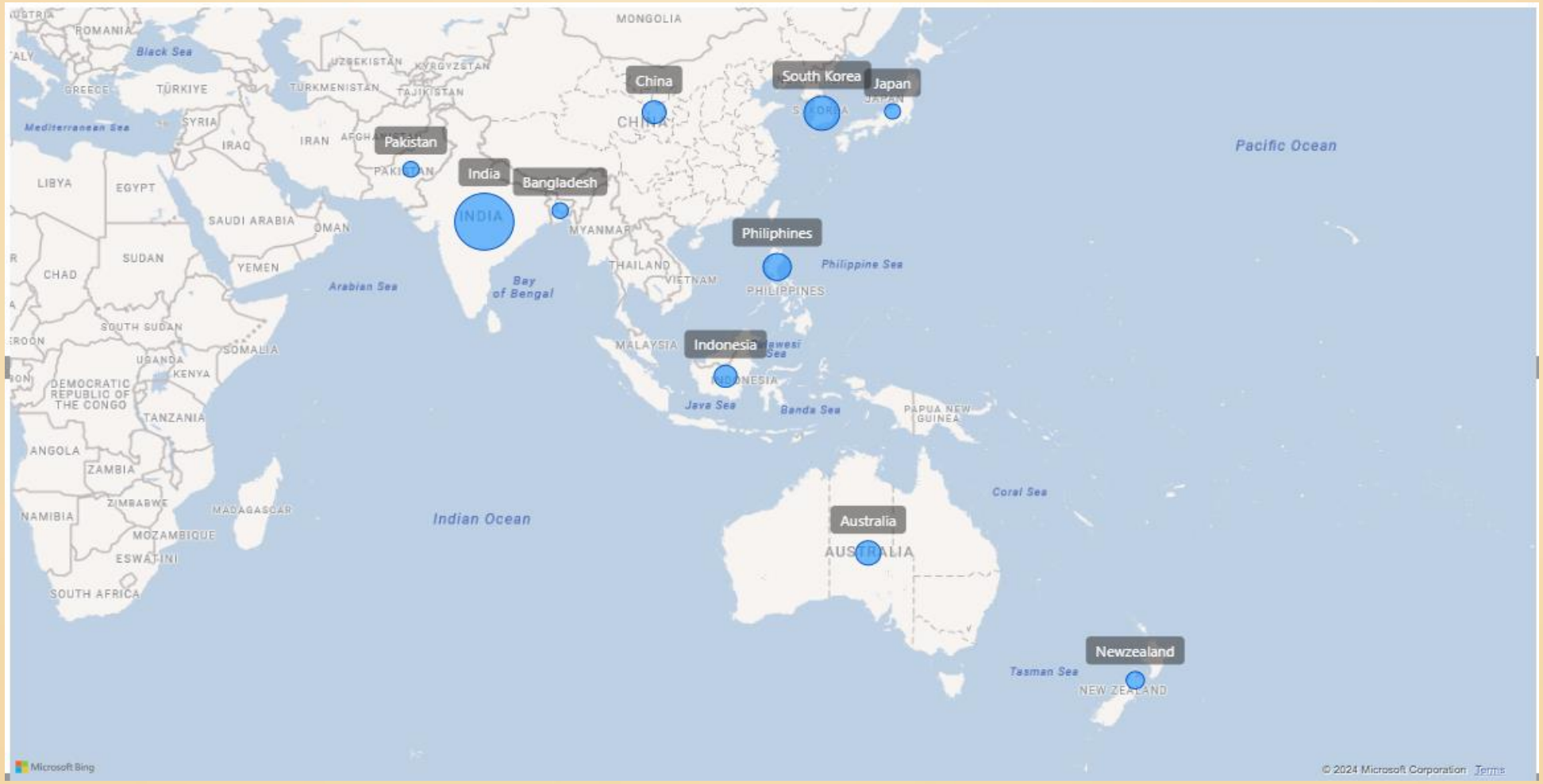
Query:

```
1 •  select distinct market
2    from dim_customer
3    where customer = 'Atliq Exclusive' and region = 'APAC';
```

Output:



Atliq Market in APAC region



Request | Query| Output

Request2 : 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.

Query & Output:

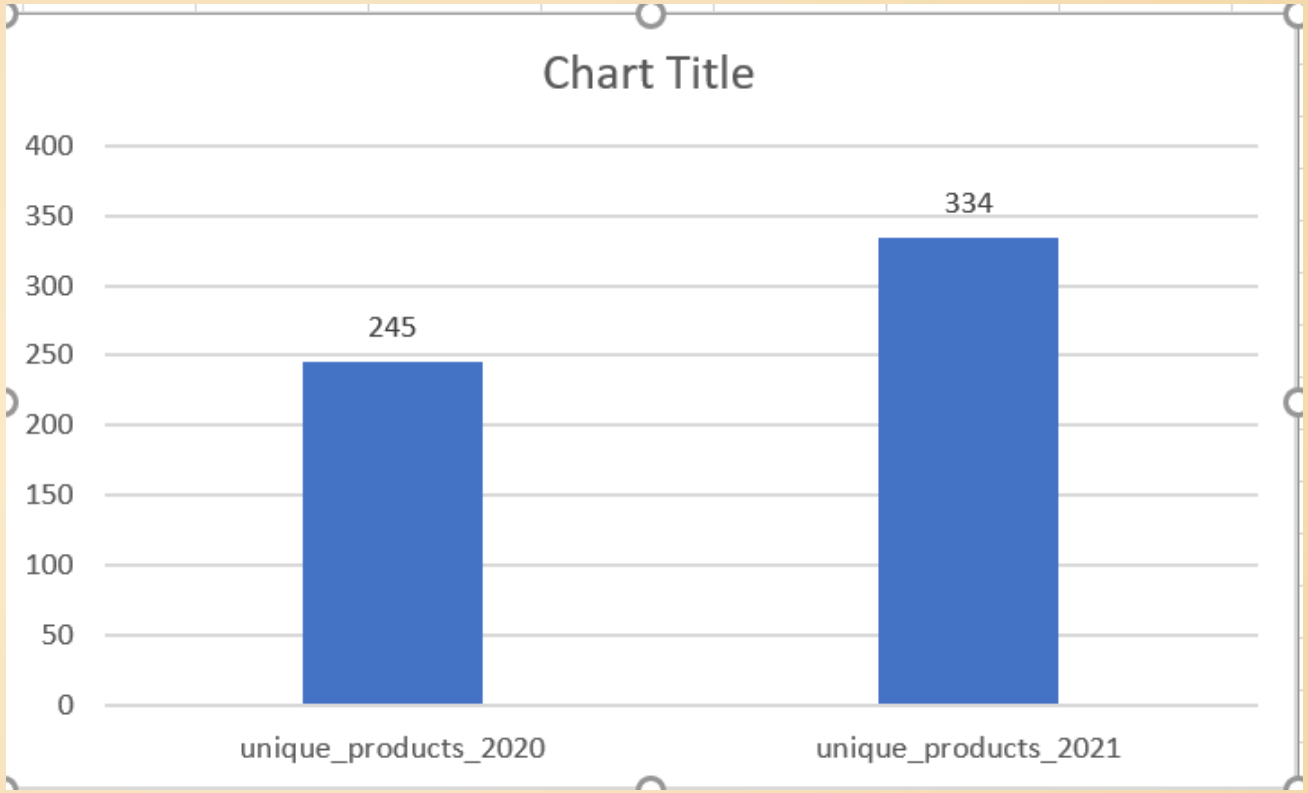
```
with product_count_2020 as (select count(distinct(product_code)) as unique_products_2020 from fact_sales_monthly
where fiscal_year=2020),
 product_count_2021 as (select count(distinct(product_code)) as unique_products_2021 from fact_sales_monthly
where fiscal_year=2021)
select unique_products_2020, unique_products_2021,
round((unique_products_2021 - unique_products_2020)*100/unique_products_2020,2) as percentage_chg
from  product_count_2020, product_count_2021;
```

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

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

Visualization and Insights

- Product Increase in 2021 is 36.33%.
- Its building a strong and dynamic reputation by meeting the changing needs of customer.



Request | Query| Output

Request3 : 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.

Query & Output:

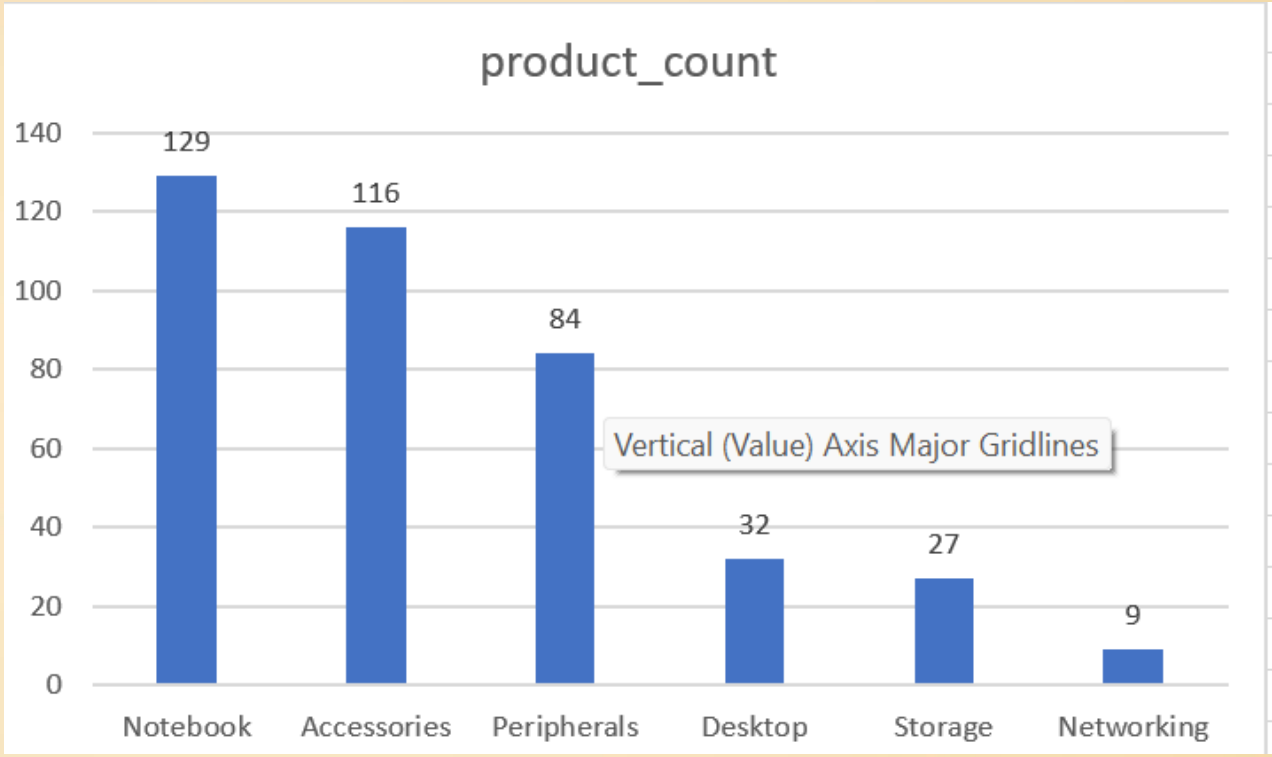
```
select count(distinct(product_code)) as product_count, segment from dim_product
group by segment
order by product_count desc;
```

Result Grid | Filter Rows:

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

Visualization and Insights

- We have a wide range of products under segment: Notebook, Accessories and Peripherals averaging around 110 while segment like Desktop, Storage and Network are lagging with an average of 23 products per segment.
- New Products must be introduced in networking.



Request | Query| Output

Request4 : : 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.

Query & Output:

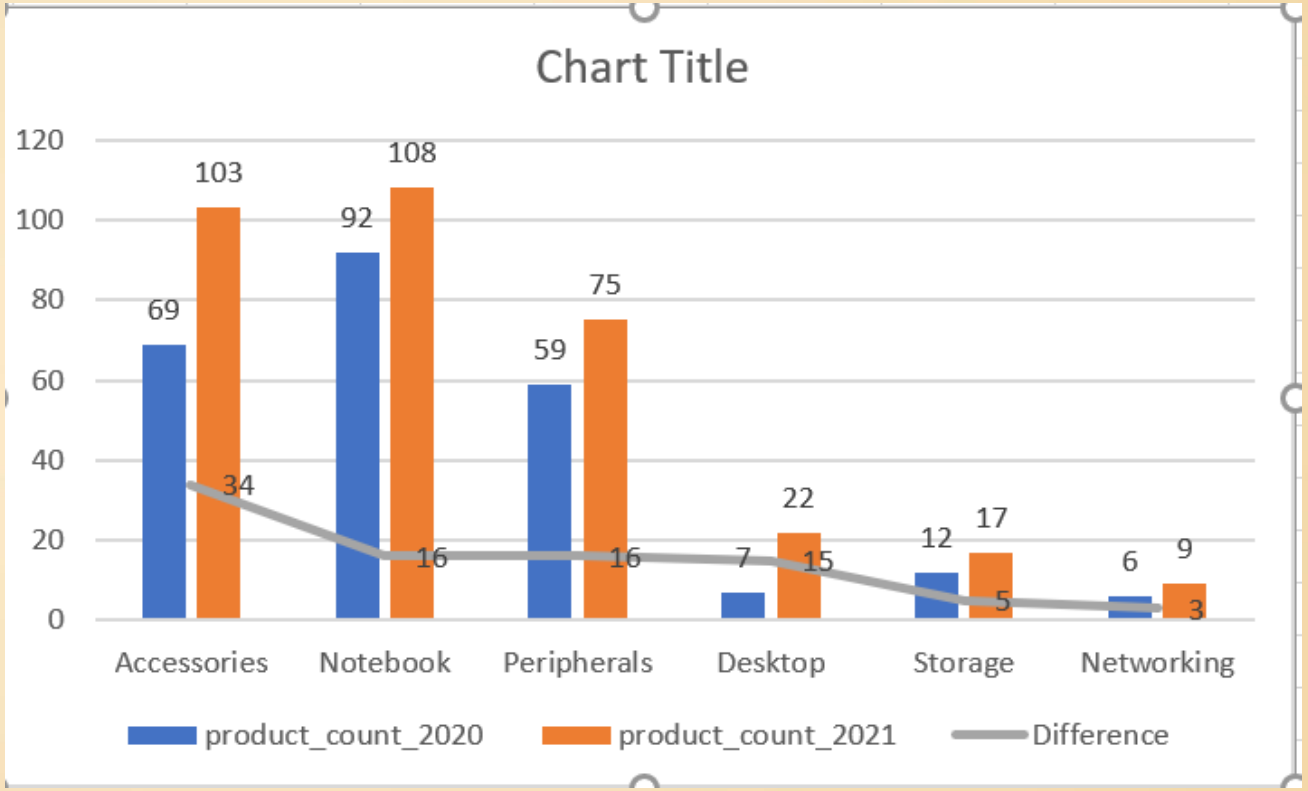
```
WITH product_count AS
(select p.segment as segment,
count(distinct (case when fiscal_year = 2020 then s.product_code end))
as product_count_2020,
count(distinct (case when fiscal_year = 2021 then s.product_code end))
as product_count_2021
from fact_sales_monthly s
 join dim_product p
on s.product_code= p.product_code
group by p.segment)
select segment, product_count_2020, product_count_2021,
 (product_count_2021-product_count_2020) as Difference
from product_count
order by difference desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Cont

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

Visualization and Insights

- Accessories has the 34 the largest increase in production.
- Storage and networking producing the lowest where networking segment is at the bottom with 3 new products introduced since 2020.



Request | Query| Output

Request5 : : Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields: product_code, product, manufacturing_cost.

Query & Output:

```
select p.product_code, p.product, ROUND(m.manufacturing_cost,2) from dim_product p
join fact_manufacturing_cost m
on p.product_code=m.product_code
where m.manufacturing_cost = (select max(manufacturing_cost) from fact_manufacturing_cost)
or
m.manufacturing_cost = (select min(manufacturing_cost) from fact_manufacturing_cost)
order by m.manufacturing_cost desc;
```

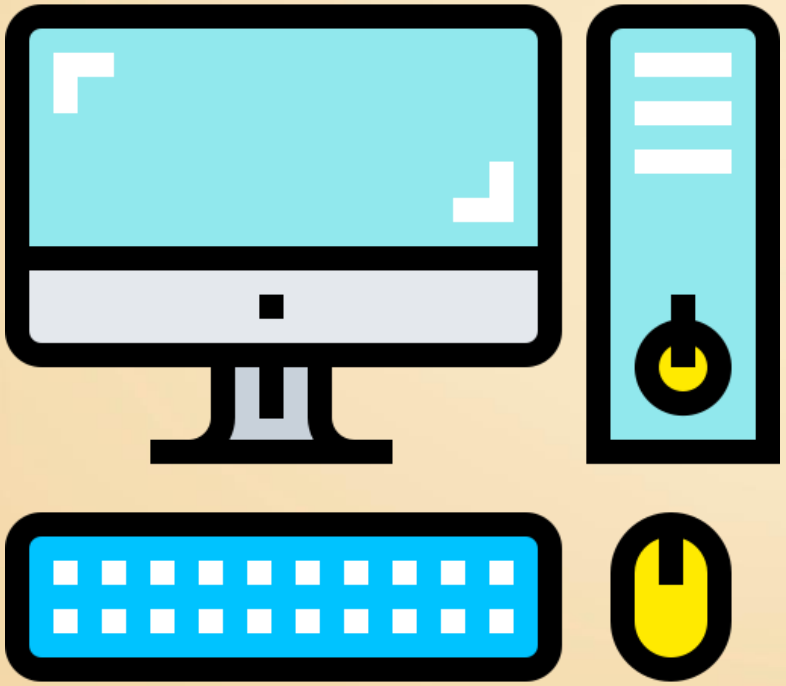
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

product_code	product	ROUND(m.manufacturing_cost,2)
A6121110208	AQ HOME Allin1 Gen 2	263.42
A2118150101	AQ Master wired x1 Ms	0.87

Visualization and Insights

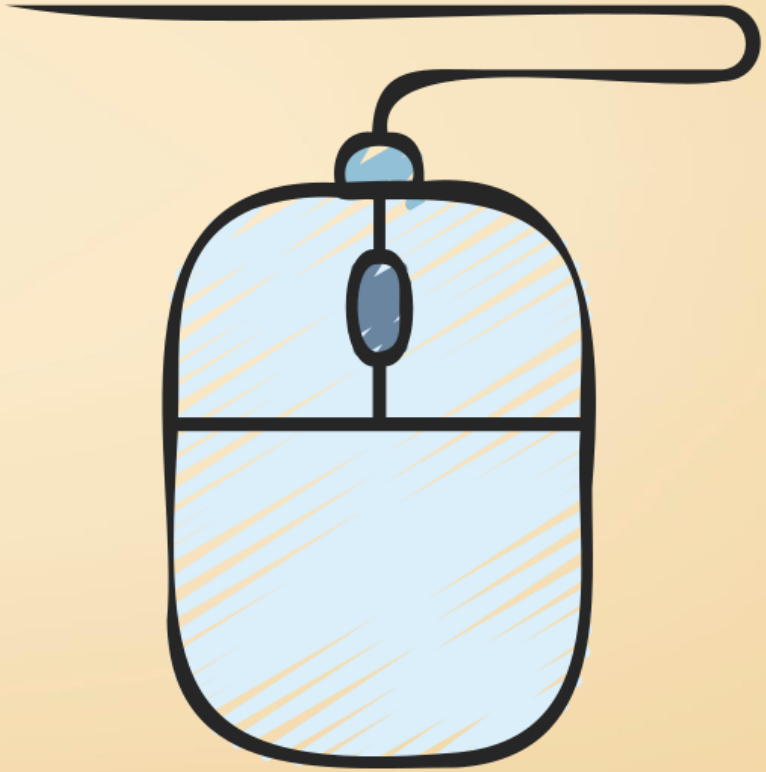
AQ HOME Allin1 Gen 2 (Plus 3) Category: Personal Desktop

$240.54



AQ Master wired x1 Ms (Standard 1) Category: Mouse

$0.89



Request | Query| Output

Request6 : : 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.

Query & Output:

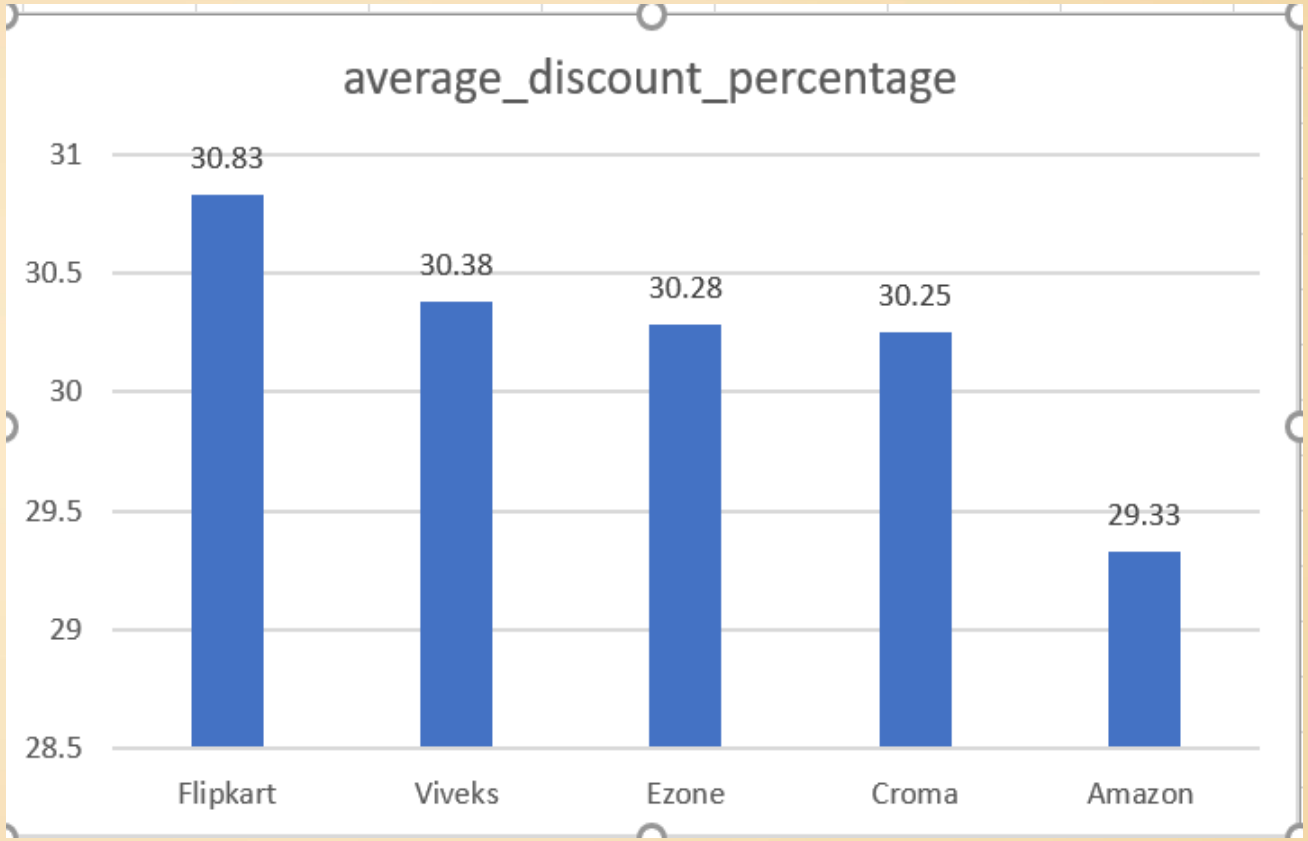
```
select c.customer_code, c.customer, round(avg(pre_invoice_discount_pct)*100,2) as  average_discount_percentage
from dim_customer c
join fact_pre_invoice_deductions pi
on c.customer_code=pi.customer_code
where fiscal_year = 2021 and market = "India"
group by customer, customer_code
order by average_discount_percentage desc
limit 5;
```

Result Grid | Filter Rows: | Export:

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

Visualization and Insights

- In 2021 the average pre invoice discount given by top 5 customers is similar however Flipkart gave the highest average discount i.e., 30.83%.



Request | Query| Output

Request7 : : 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.

Query & Output:

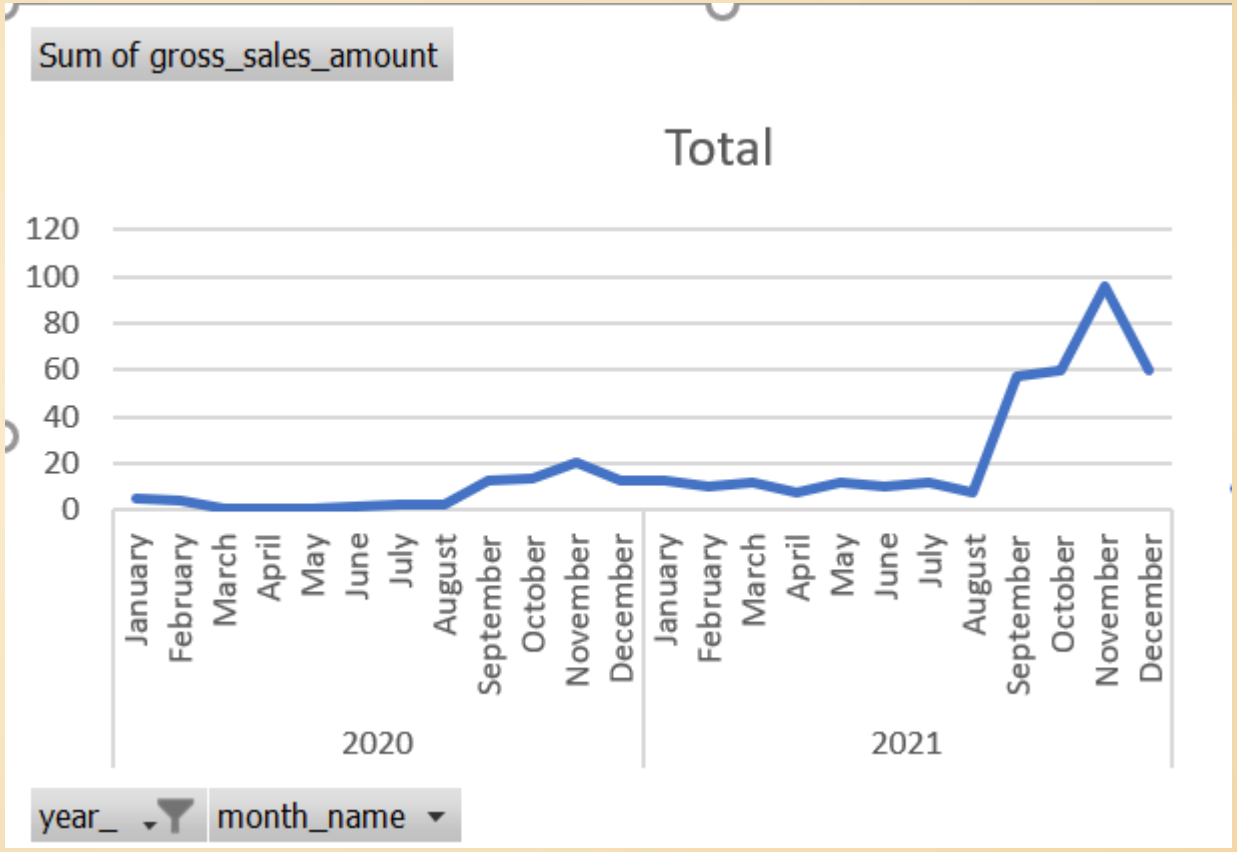
```
select monthname(date) as month_name, year(date) as year_,
round(sum(fs.sold_quantity*fgp.gross_price)/1000000,2) as gross_sales_amount
from fact_sales_monthly fs
join fact_gross_price fgp
on fs.product_code= fgp.product_code
and fs.fiscal_year = fgp.fiscal_year
join dim_customer c
on c.customer_code = fs.customer_code
where customer = "Atliq Exclusive"
group by month_name, year_
order by year_ desc;
```

Result Grid | Filter Rows:

month_name	year_	gross_sales_amount
April	2021	7.31
March	2021	12.14
February	2021	10.13
January	2021	12.40
June	2021	9.82
December	2021	60.16
May	2021	12.15
July	2021	12.09
August	2021	7.18
September	2021	57.40
October	2021	59.61
November	2021	95.69
November	2020	20.46
October	2020	13.22
September	2020	12.35
August	2020	2.79

Visualization and Insights

- For Atliq Exclusive Store maximum sales were recorded in November2021 and lowest sales recorded in March-2020.
- Low sales from March to August in 2020 is due to pandemic when stores were shut.



Request | Query| Output

Request8 : In which quarter of 2020, got the maximum total_quantity_sold? The final output contains these fields sorted by the total_quantity_sold: Quarter, total_quantity_sold .

Query:

```
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'
    else 'Q4'
   end as Quarters ,
   sum(sold_quantity) as Total_sold_quantity
from fact_sales_monthly
where fiscal_year = 2020
Group by quarters
order by Total_sold_quantity desc;
```

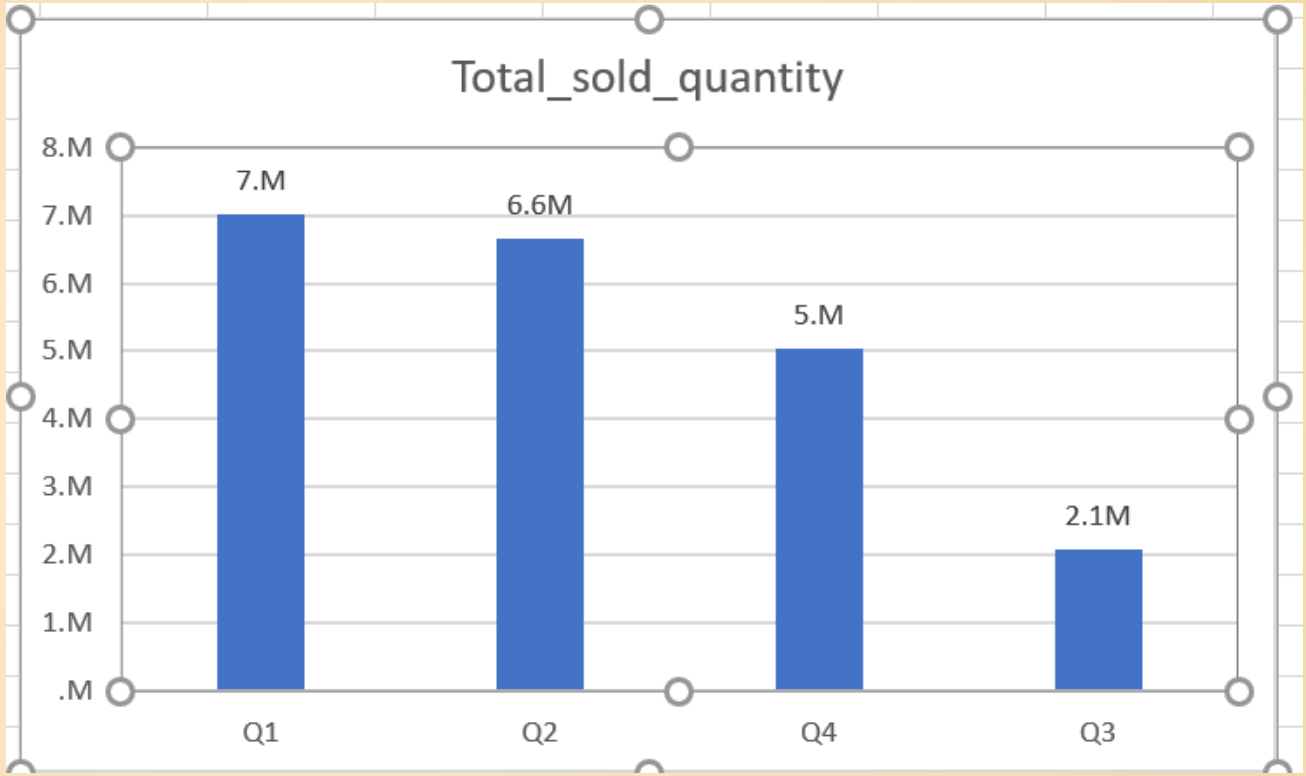
Output:

Result Grid | Filter Rows:

Quarters	Total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

Visualization and Insights

- In Quarter 1 sold maximum quantity i.e. 7 M where as Quarter 3 significantly decreased to 2.1 M, the reason behind is the Covid-Lockdown in the month of March, April & May .



Request | Query| Output

Request9 : 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.

Query & Output:

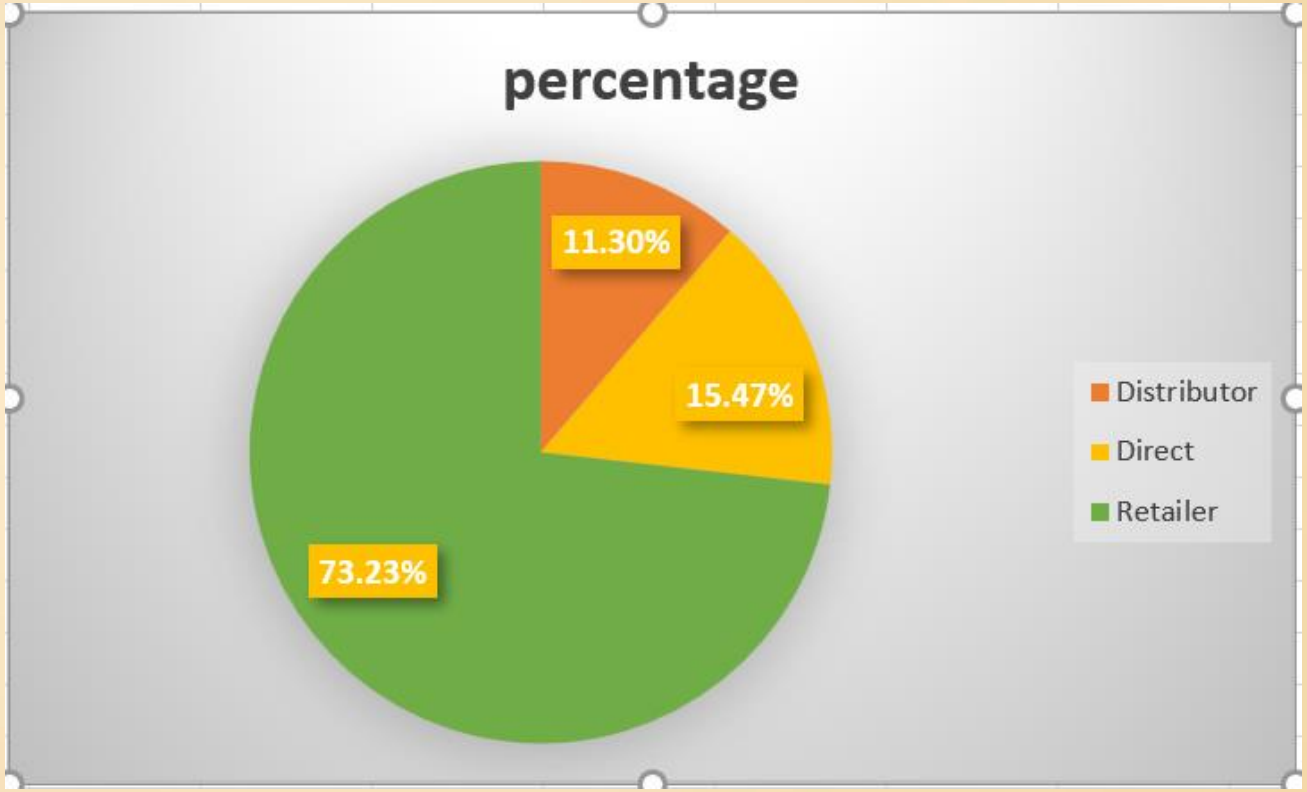
```
with gross_sales as (select c.channel as channel,
round(sum(fgp.gross_price*fs.sold_quantity)/1000000,2) as gross_sales_mlns
from fact_sales_monthly fs
join fact_gross_price fgp
on fs.product_code =  fgp.product_code
and fs.fiscal_year =  fgp.fiscal_year
join dim_customer c
on fs.customer_code= c.customer_code
where fs.fiscal_year = 2021
group by c.channel)
select channel, gross_sales_mlns ,
concat(round(gross_sales_mlns/sum(gross_sales_mlns) over() *100 ,2),'%') as percentage from gross_sales
order by percentage;
```

Result Grid | Filter Rows:

channel	gross_sales_mlns	percentage
Distributor	188.03	11.30%
Direct	257.53	15.47%
Retailer	1219.08	73.23%

Visualization and Insights

- The Retailers contribute to the major portion of the sales that is 73% where as Direct and Distributer combined sales is 27%.



Request | Query| Output

Request10 : 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.

Query:

```
with top3_products as
(select p.division as Division,
   p.product_code as product_code,
   p.product as product,
   sum(fs.sold_quantity) as total_sold_quantity,
rank() over(partition by division
order by sum(sold_quantity) desc) as rank_order
from fact_sales_monthly fs
join dim_product p
on fs.product_code=p.product_code
where fs.fiscal_year = 2021
group by  p.division, p.product_code, p.product
order by total_sold_quantity desc)
select Division, product_code,
product, total_sold_quantity, rank_order
from top3_products
where rank_order <= 3;
```

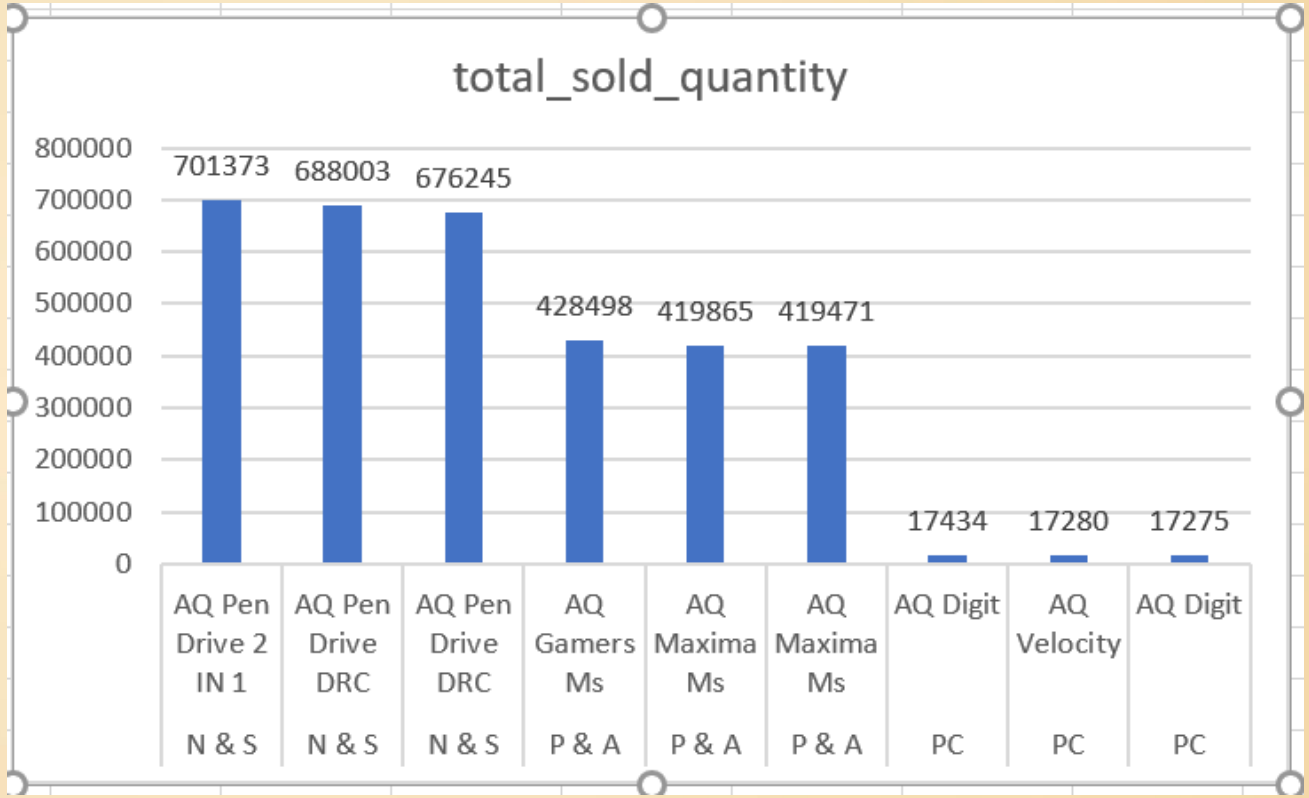
Output:

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

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

Visualization and Insights

- Top 3 products in each division that have a highest total sold quantity in the fiscal year 2021.
- For PC, top selling product is AQ Digit PC with 17,434 quantities sold.
- The company can take some strategic decisions to improve sale in PC division.




THANK
YOU!