CONSUMER GOODS ANALYTICS

RESUME PROJECT CHALLENGE # 4

Presented by Ritu

AD_HOC-REQUEST:1

QUESTION:

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

SQL Query

```
select distinct market
from dim_customer
 where customer="Atliq Exclusive"
 and region = "APAC"
```

Output

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

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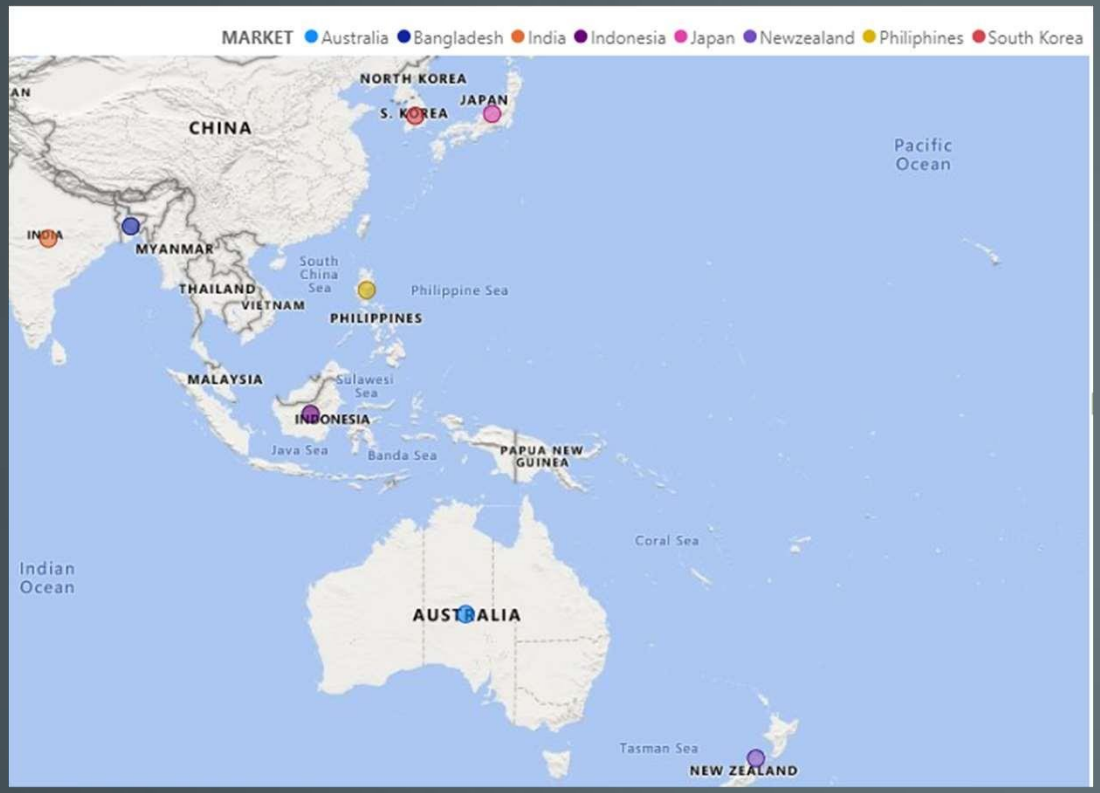
VISUALS-1



Insights

- "Atliq Exclusive" has a presence in several countries across the APAC region, including India, Indonesia, Japan, the Philippines, South Korea, Australia, New Zealand, and Bangladesh.

- It reflects a robust market presence and adaptability to different cultural and economic contexts in the Asia-Pacific region.

Presented by Ritu

AD_HOC-REQUEST:2

QUESTION:

What is the percentage of unique product increase in 2021vs. 2020? The final output contains these fields, unique_products_2020 unique_products_2021 percentage_chg

SQL Query

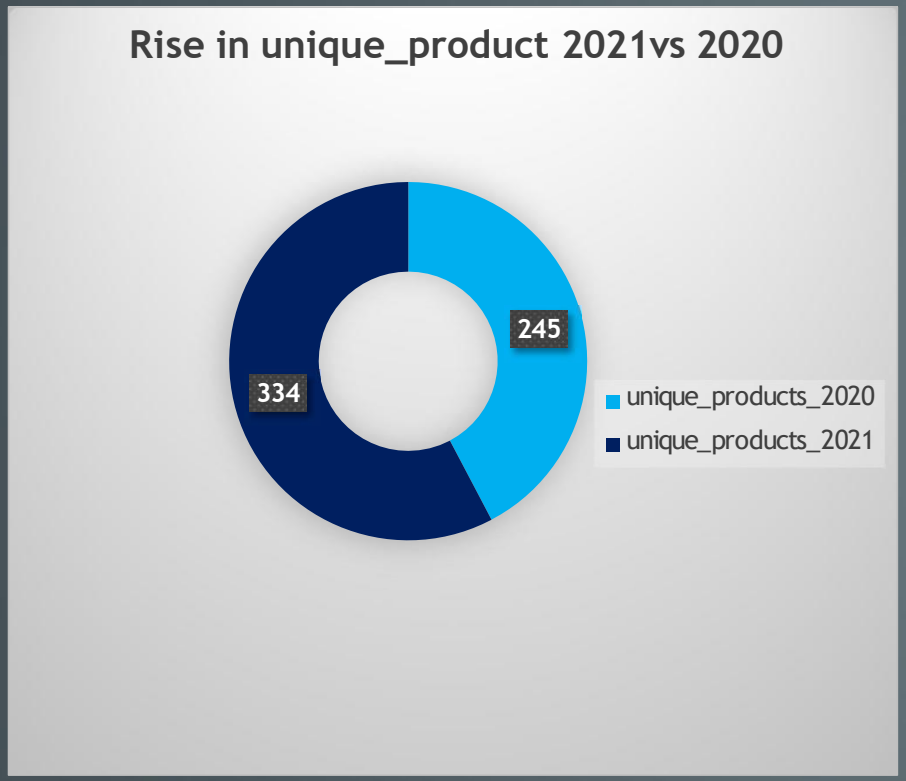
```
WITH X AS
   (SELECT COUNT(DISTINCT product_code) AS unique_products_2020
   FROM  fact_sales_monthly  WHERE fiscal_year= 2020),
 Y AS
  (SELECT COUNT(DISTINCT product_code) AS unique_products_2021
  FROM fact_sales_monthly WHERE fiscal_year= 2021)
SELECT
 X.unique_products_2020,
 Y.unique_products_2021,
round(((Y.unique_products_2021-X.unique_products_2020)/X.unique_products_2020)*100,2)
AS Percentage_chg FROM X,Y;
```

Output

unique_products_2020	unique_products_2021	Percentage_chg
245	334	36.33

Presented by Ritu

VISUALS-2



Insights

- There was a significant increase in unique products, with 334 in 2021 compared to 245 in 2020.
- The percentage change represents a growth of 36.33% in unique products from one year to the next.
- This substantial increase in unique products suggests a focus on expanding product offerings, which can attract a broader customer base and potentially boost sales and revenue.
- It's a positive indicator of business growth and adaptability to changing market demands.

Presented by Ritu

AD_HOC-REQUEST:3

QUESTION:

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

SQL Query

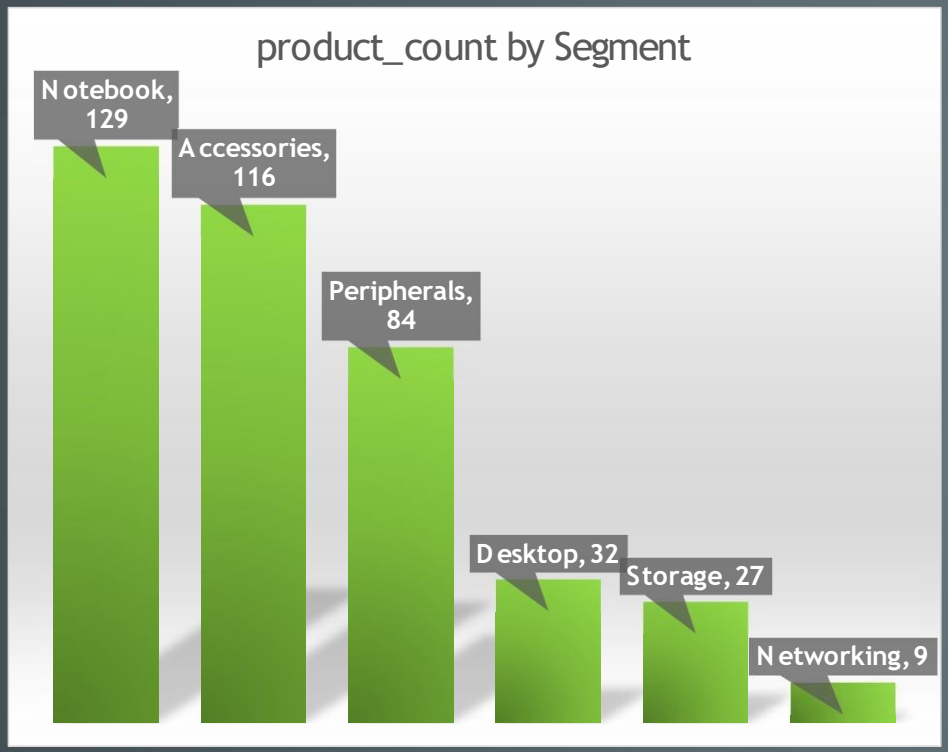
```
select
segment,
count(distinct(product_code)) as product_count
from dim_product
group by segment
order by product_count  desc
```

Output

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

Presented by Ritu

VISUALS-3



Insights

- The "Notebook" segment has the highest product count, with 129 products.
- The "Networking" segment has the smallest product count with only 9 products.
- These insights indicate the diversity and product offerings within each segment, with "Notebook" and "Accessories" offering a wide range of options, while "Networking" has a more limited selection.
- The variety in product offerings allows catering to various customer preferences and needs across different segments

Presented by Ritu

AD_HOC-REQUEST:4

QUESTION:

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

SQL Query

```
with x as (  select p.segment,
 count(distinct s.product_code) as product_count_2020 from dim_product p
join fact_sales_monthly s  on p.product_code = s.product_code
where s.fiscal_year=2020 group by p.segment)  ,
 y as (  select p.segment,
  count(distinct s.product_code) as product_count_2021 from dim_product p
join fact_sales_monthly s  on p.product_code = s.product_code
where s.fiscal_year=2021 group by p.segment)
select x.segment , product_count_2020 ,
product_count_2021,abs(x.product_count_2020-y.product_count_2021) as difference
from x join y on x.segment=y.segment  order by difference desc
```

Output

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

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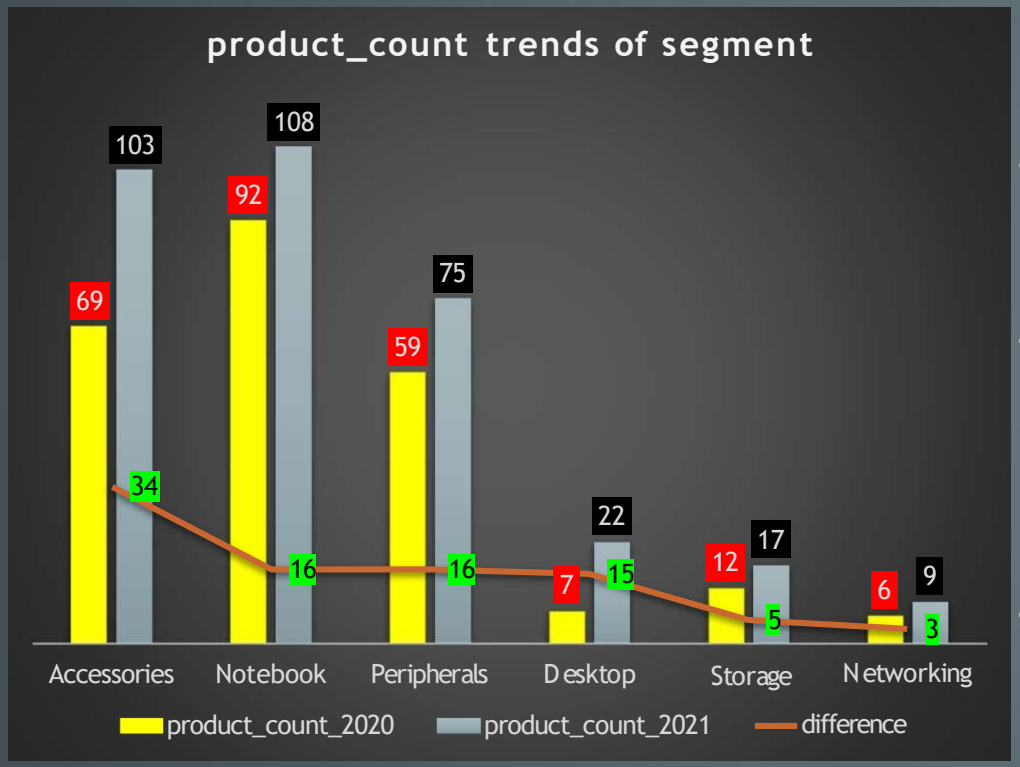
VISUALS 4



Insights

- The "Accessories" segment saw a significant increase in product counts, with 34 more products in 2021 compared to 2020.
- These insights suggest a general trend of product portfolio growth, particularly in the "Accessories" and "Notebook" segments, which can indicate a strategy to cater to a broader range of customer preferences.
- The growth in product variety may enhance market competitiveness and offer customers more choices.

Presented by Ritu

AD_HOC-REQUEST:5

QUESTION:

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

SQL Query

```
select  m.product_code, p.product, m.manufacturing_cost
from  fact_manufacturing_cost m join dim_product p
using (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;
```

Output

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

Insights

- "AQ HOME Allin1 Gen 2" has a relatively higher manufacturing cost of 240.5364.
- In contrast, "AQ Master wired x1 Ms" has a significantly lower manufacturing cost of 0.892.

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AD_HOC-REQUEST:6

QUESTION:

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

SQL Query

```sql
select i.customer_code, c.customer,
round(avg(i.pre_invoice_discount_pct)*100,2) as avg_dis_pct
from fact_pre_invoice_deductions i
join dim_customer c using (customer_code)
where fiscal_year =2021 and c.market="india"
group by  i.customer_code, c.customer
order by avg_dis_pct desc
limit 5;
```

Output

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

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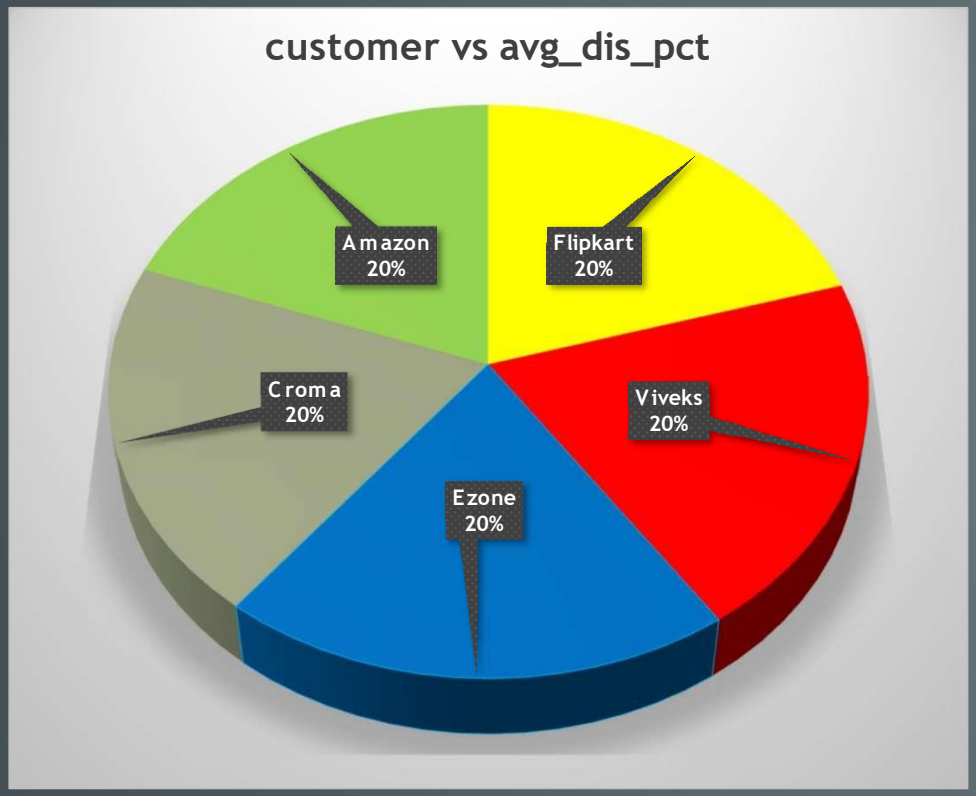
VISUALS-6



Insights

- "Flipkart" has the highest average pre-invoice discount percentage at 30.83%.
- "Amazon" has a comparatively lower average discount at 29.33%.
- These insights indicate varying discount strategies among customers, with "Flipkart" and "Viveks" offering the highest average discounts, potentially attracting cost-conscious shoppers.
- "Amazon" provides relatively lower discounts, suggesting a different pricing strategy or a customer base less sensitive to discounts.
- These insights can be valuable for adjusting discount strategies and understanding customer preferences.

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AD_HOC-REQUEST:7

QUESTION:

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

SQL Query

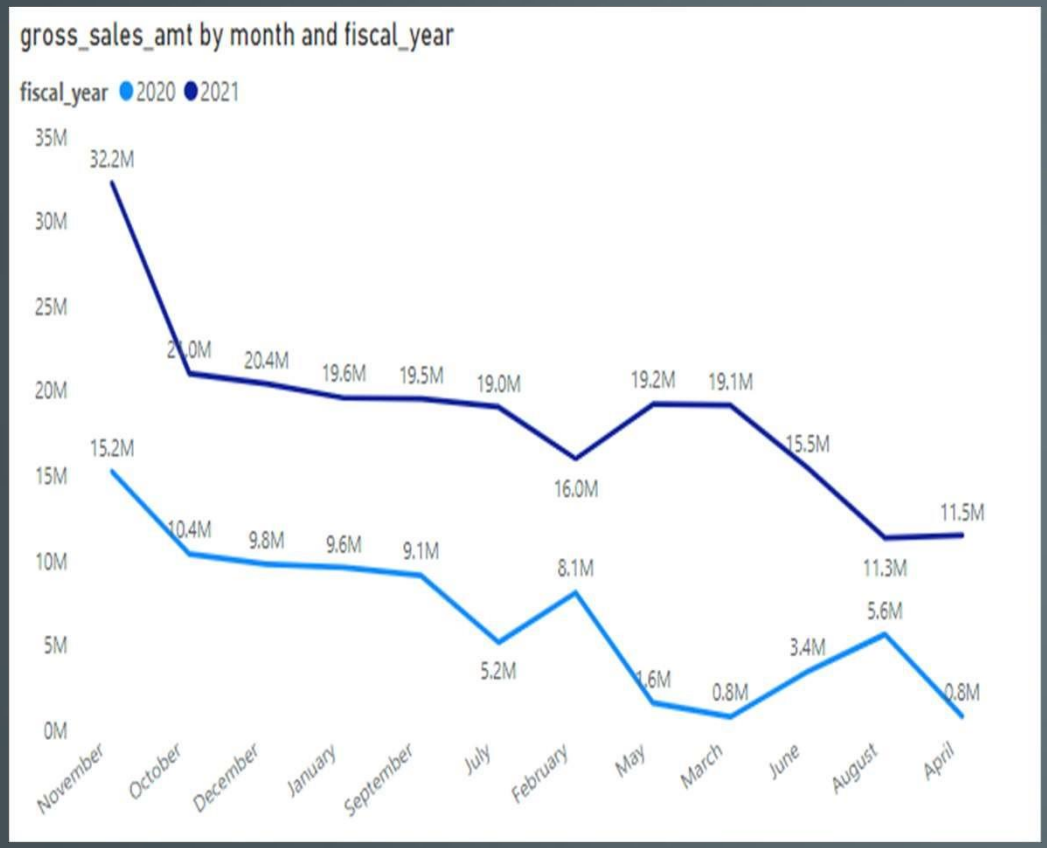
```
 select monthname(s.date) as month,s.fiscal_year,
 round(sum(g.gross_price*sold_quantity),2)
as gross_sales_amt from fact_sales_monthly s
join dim_customer c  using(customer_code)
join fact_gross_price g using(product_code)
where customer="atliq exclusive"
group by monthname(s.date) ,s.fiscal_year
order by fiscal_year ;
```

Presented by Ritu

Output

month	fiscal_year	gross_sales_amt
September	2020	9092670.34
October	2020	10378637.60
November	2020	15231894.97
December	2020	9755795.06
January	2020	9584951.94
February	2020	8083995.55
March	2020	766976.45
April	2020	800071.95
May	2020	1586964.48
June	2020	3429736.57
July	2020	5151815.40
August	2020	5638281.83
September	2021	19530271.30
October	2021	21016218.21
November	2021	32247289.79
December	2021	20409063.18
January	2021	19570701.71
February	2021	15986603.89
March	2021	19149624.92
April	2021	11483530.30
May	2021	19204309.41
June	2021	15457579.66
July	2021	19044968.82
August	2021	11324548.34

VISUALS-7



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Insights

- November 2021 had the highest gross sales amount, reaching $32,247,289.79.
- In contrast, the fiscal year 2021 started with lower sales in September but still had a significant peak in November.
- There is a notable seasonality in sales, with November being a consistently strong month.
- The months of March and April in fiscal year 2020 had relatively low sales, which improved in fiscal year 2021.
- These insights can guide strategic decisions, such as focusing marketing efforts and inventory planning around the peak sales months and addressing potential challenges during lower sales months.

AD_HOC-REQUEST:8

QUESTION:

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

SQL Query

```
SELECT
CASE
    WHEN month(date) in (9,10,11) then 'Q1'
    WHEN month(date) in (12,01,02) then 'Q2'
    WHEN month(date) in (03,04,05) then 'Q3'
    ELSE 'Q4'
    END AS Quarters,
    SUM(sold_quantity) AS total_sold_qty
FROM fact_sales_monthly
WHERE fiscal_year = 2020
GROUP BY Quarters
ORDER BY total_sold_qty DESC;
```

Output

Quarters	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

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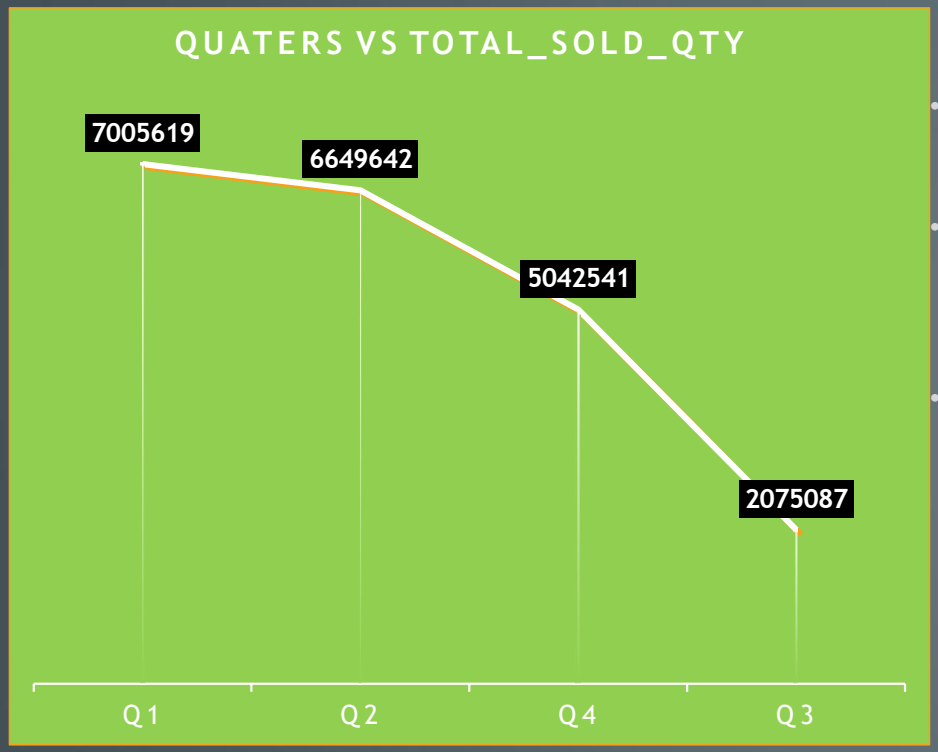
VISUALS-8



Insights

- The highest total sold quantity is in Q1, with 7,005,619 units.
- These insights highlight a seasonal variation in sales, with Q1 and Q2 being the strongest quarters and Q3 being the weakest.
- This information is valuable for planning inventory and marketing strategies to align with seasonal demand

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AD_HOC-REQUEST:9

QUESTION:

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

SQL Query

```
 with x as (select c.channel,
round(sum(g.gross_price*s.sold_quantity)/100000,2) as gross_sales_mln
from fact_sales_monthly s
join dim_customer c  using(customer_code)
join fact_gross_price g using(product_code)
where s.fiscal_year=2021
group by c.channel)
select channel, gross_sales_mln,
round((gross_sales_mln/(select sum(gross_sales_mln) from x))*100,2)
 as pct from x
order by gross_sales_mln desc;
```

Output

channel	gross_sales_mln	pct
Retailer	19241.70	73.22
Direct	4066.87	15.47
Distributor	2971.76	11.31

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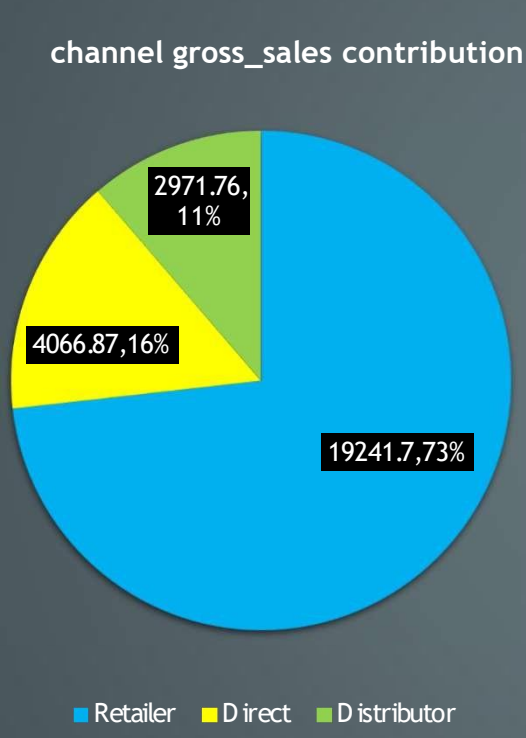
VISUALS 9



Insights

- The "Retailer" channel accounts for the majority of sales, contributing to 73.22% of gross sales.
- The "Direct" channel also plays a significant role, representing 15.47% of gross sales.
- The "Distributor" channel contributes 11.31% of gross sales.
- A significant focus on the "Retailer" channel suggests it is the primary revenue driver.
- Diversification and growth opportunities may be explored in the "Direct" and "Distributor" channels to further maximize sales.

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AD_HOC-REQUEST:10

QUESTION:

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

SQL Query

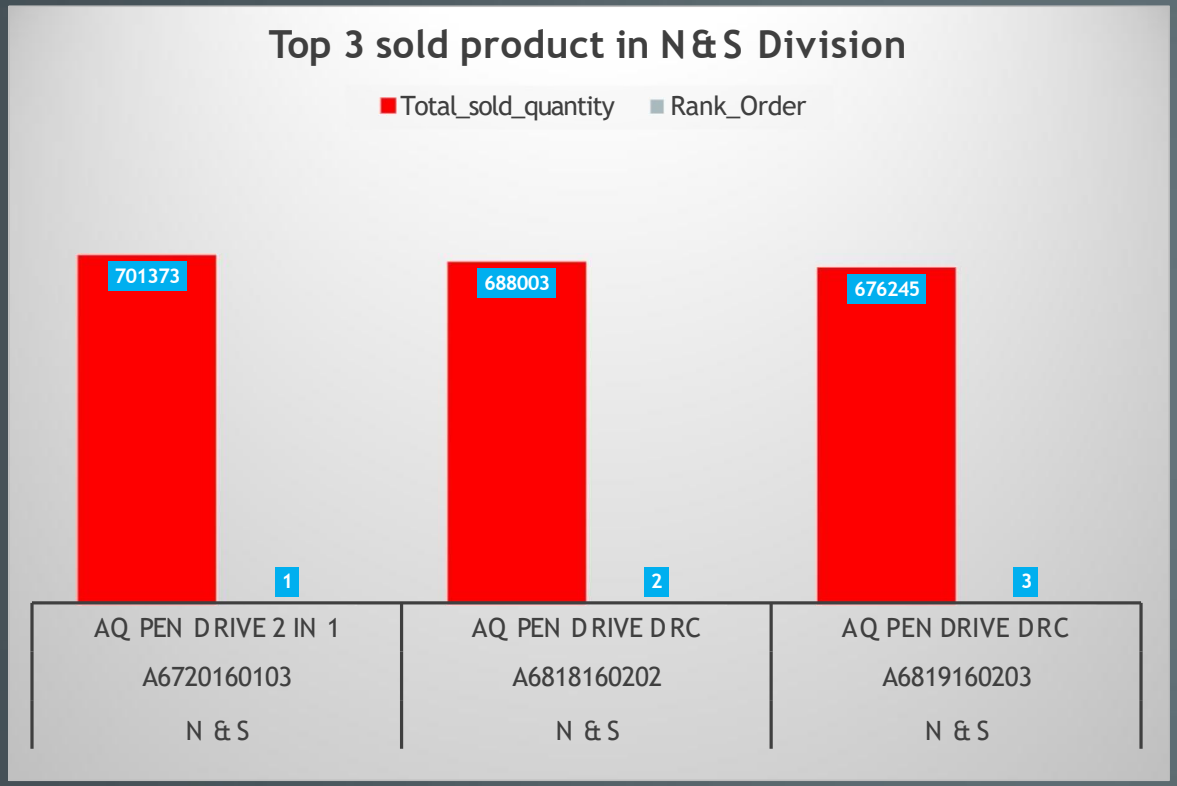
```
WITH  x AS
(
SELECT P.division, S.product_code, P.product, SUM(S.sold_quantity) AS Total_sold_quantity,
 RANK() OVER(PARTITION BY P.division ORDER BY SUM(S.sold_quantity)  DESC) AS 'Rank_Order'
FROM dim_product P JOIN fact_sales_monthly S
ON P.product_code = S.product_code
WHERE S.fiscal_year = 2021
GROUP BY  P.division, S.product_code,  P.product)

 SELECT *  FROM x
WHERE  Rank_Order IN (1,2,3) ORDER BY division,  Rank_Order;
```

Output

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

Presented by Ritu

VISUALS -10



Insights

- The top three products: "AQ Pen Drive 2 IN 1," "AQ Pen Drive DRC," and another variant of "AQ Pen Drive DRC."
- Strong consumer preference for pen drives and related items in this division.
- The division's leadership in this market segment, indicating growth potential.
- Efficient inventory management is crucial for sustained success.

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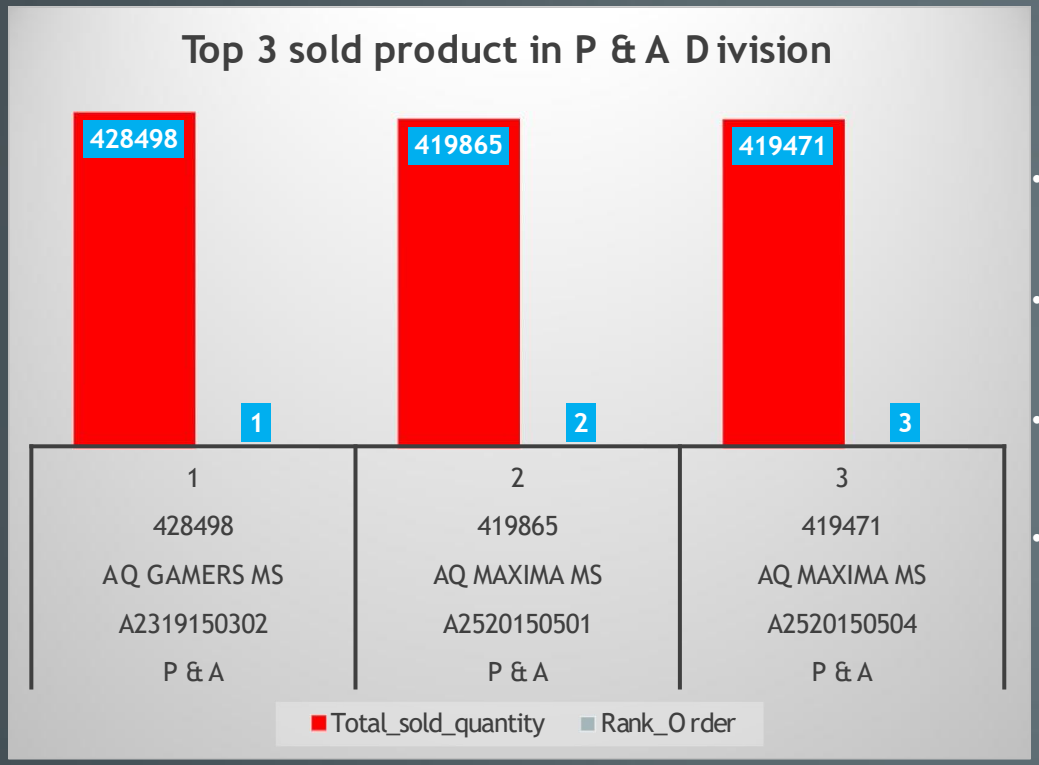
VISUALS -10



Insights

- The best-selling product is "AQ Gamers Ms," followed by two variants of "AQ Maxima Ms."
- This division specializes in gaming-related products, appealing to a specific customer niche..
- Efficient inventory management is essential to meet customer demand.
- Continuously promote and brand the top products to sustain success.

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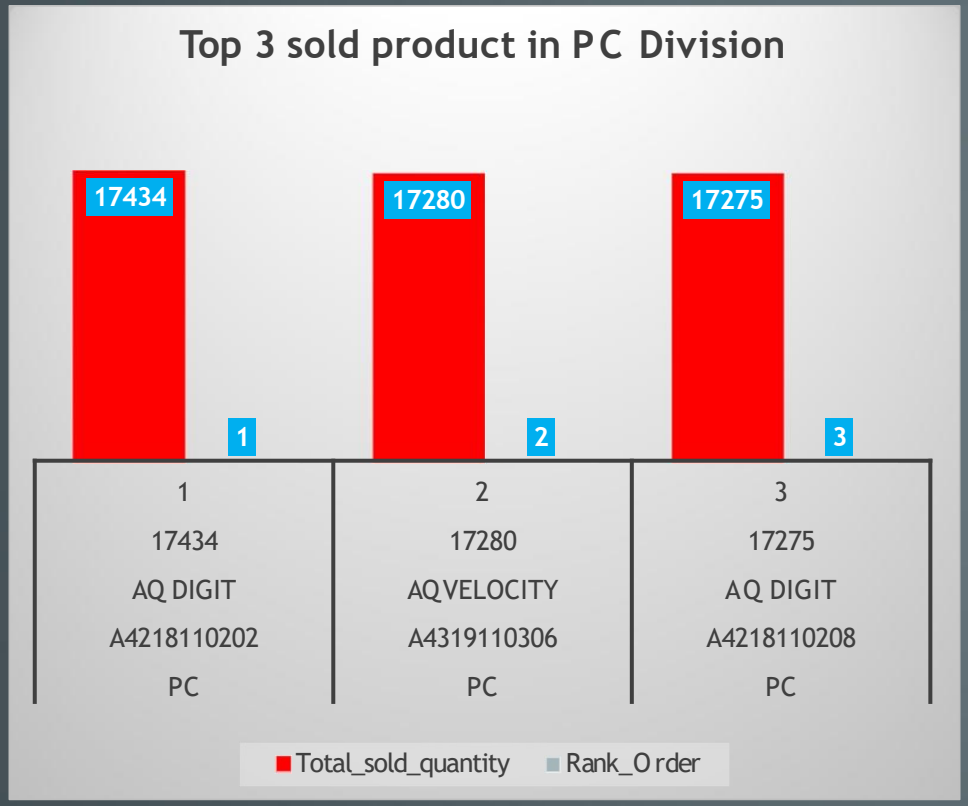
VISUALS -10



Insights

- The best-selling product in the "PC" division is "AQ Digit," with two variants followed by “AQ velocity”.
- The division specializes in PC-related products, indicating a focus on the computing niche.
- Efficient inventory management is essential to meet customer demand.
- Ongoing branding and marketing efforts are important to maintain success.

Presented by Ritu

THANK YOU

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