Consumer Goods
Ad-hoc insights



Understand consumer trends for a competitive edge

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Business Challenge Overview

Company Overview: Atliq Hardware is a leading computer hardware manufacturer in India, with a significant presence in international markets.

Importance of Insights: The company recognizes the value of gaining key insights.

Current Challenges:

Management faces difficulties due to inadequate insights from past analytical reports.

. Lack of clear data, it's hard for the organization to spot sales trends.
. Evaluating product offerings.
. Understanding the pandemic's impact on growth goals.

Management's Approach: To address these issues, management relies on ad hoc requests to **Data analysts** for the necessary insights to make informed decisions.

Report for Atliq Hardware

1 **Question:**

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

Output:

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Query:

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

2 **Question:**

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

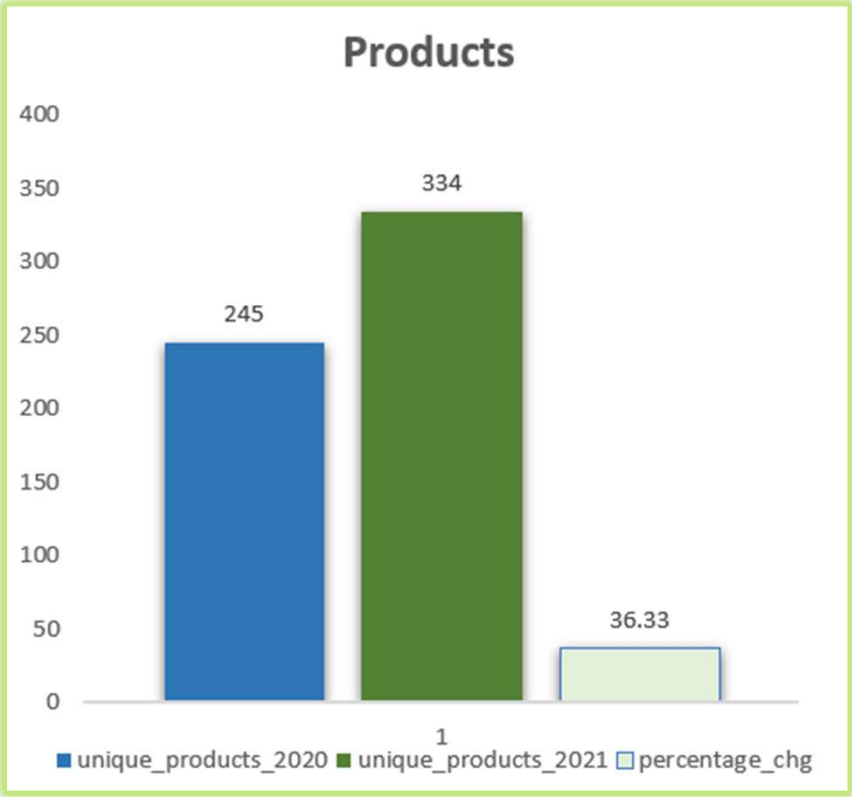
Output:

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

Query:

```
with cte1 as (
             SELECT count(distinct
                case
                     when fiscal_year =2020 then product_code
                end ) as unique_products_2020,
                    count(distinct
                case
                     when fiscal_year =2021 then product_code
                end ) as unique_products_2021
                from fact_sales_monthly)
    select  *,
    round(((unique_products_2021 - unique_products_2020)/unique_products_2020)*100,2) as percentage_chg
    from cte1;
```

2



From this visual,
we can see a significant increase in unique products offered by **AtliQ Hardwares**, rising from **245** in 2020 to **334** in 2021—a **36.33%** growth. This reflects a strong expansion in their product range within just one year.

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

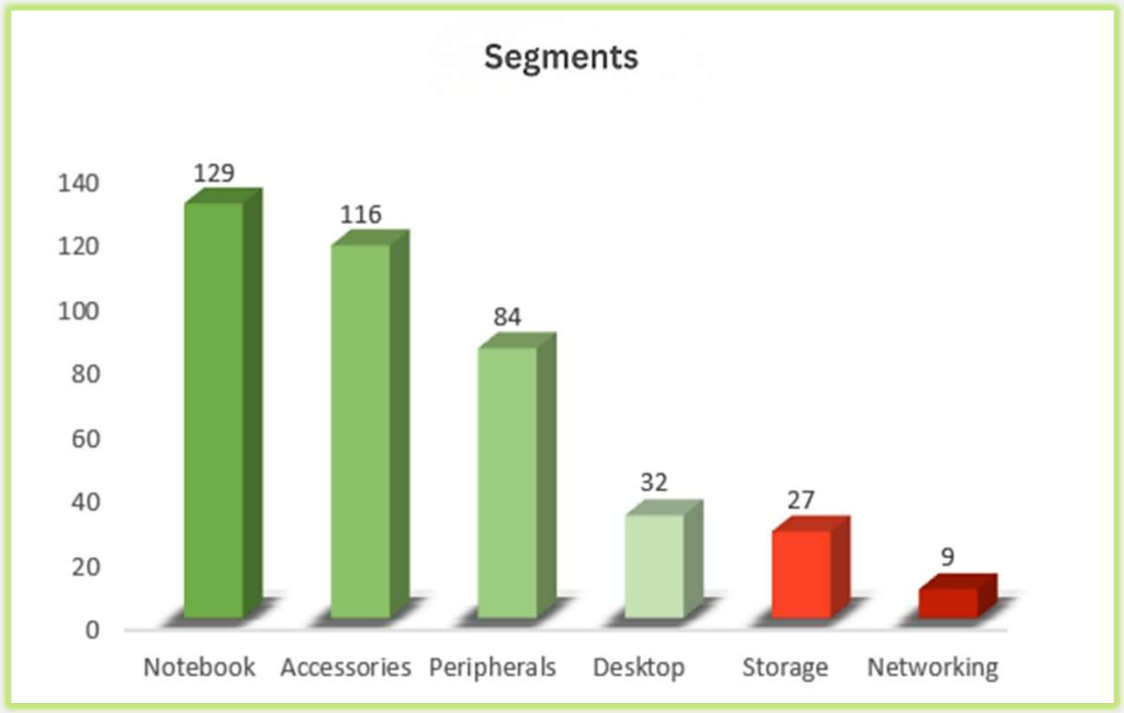
Output:

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

Query:

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

3



This chart illustrates the product distribution at **AtliQ Hardwares**, showing various segments.

. **Notebooks** have the largest share with **129** products, followed by **Accessories** with **116** products, and **others**.

. The smallest segment is **Networking**, with only **9** products

Overall
Notebooks and **Accessories** hold the largest share of the product distribution at AtliQ Hardwares.

4 **Question:**

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

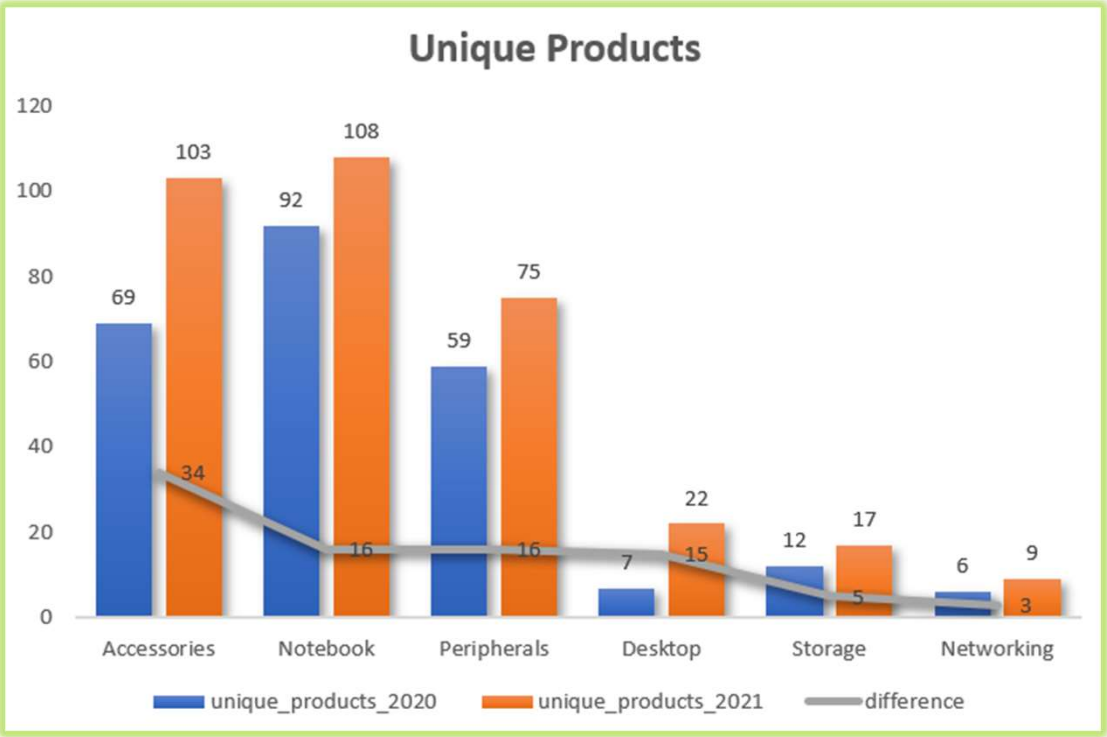
Output:

segment	unique_products_2020	unique_products_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

Query:

```
with cte1 as (
              SELECT p.segment,
          count(distinct
                  case
                       when s.fiscal_year =2020 then product_code
                  end ) as unique_products_2020,
          count(distinct
                  case
                       when s.fiscal_year =2021 then product_code
                  end ) as unique_products_2021
                  from dim_product p
                  join fact_sales_monthly s
                  using ( product_code )
                  group by segment)
      select *,
       (unique_products_2021 - unique_products_2020) as difference
      from cte1
      order by difference  desc ;
```

4



All segments experienced an increase in their product counts.

. The **Accessories** segment saw the most significant growth, with an increase of **34 units**, rising from **69** to **103**, followed by others.

. However, the **Storage** segment had a minimal increase of just **5 units**, rising from **12** to **17**,

. while the **Networking** segment saw a slight increase of 3 units, moving from **6** to **9**.

Overall, the data indicates a **positive** trend in product counts across all segments.

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

Output:

product_code	product	manufacturing_cost
A2118150101	AQ Master wired x1 Ms	0.8654
A6121110208	AQ HOME Allin1 Gen 2	263.4207

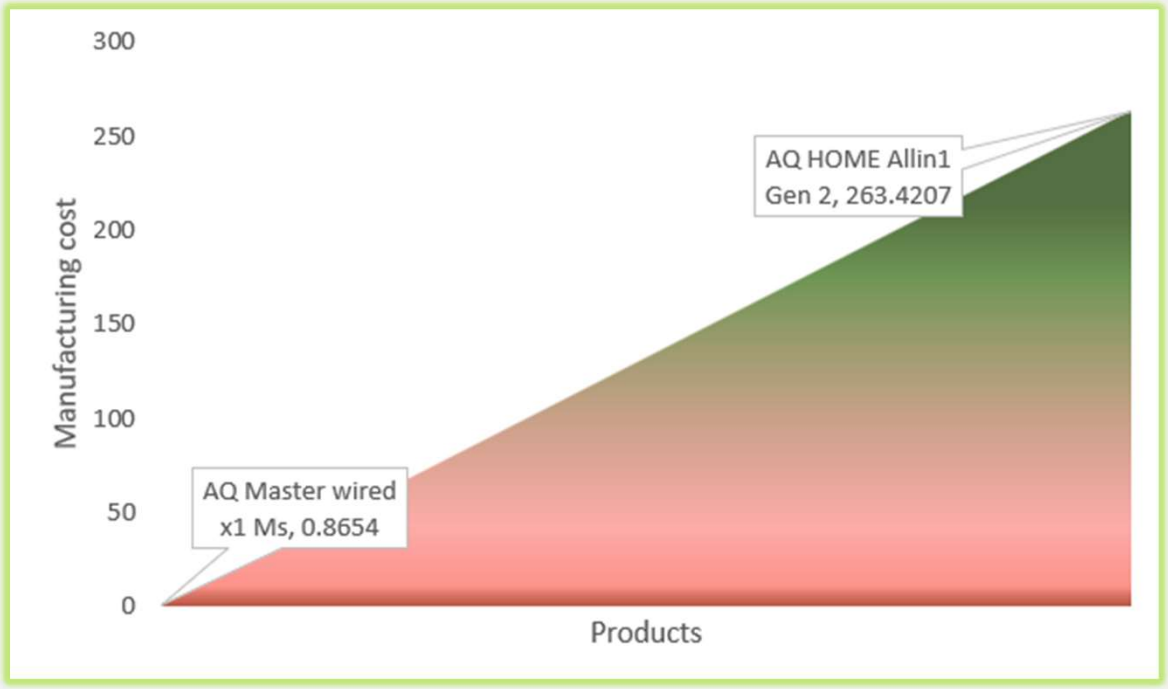
Query:

```
(SELECT product_code,
        p.product,
        m.manufacturing_cost
FROM fact_manufacturing_cost m
join dim_product p
using( product_code)
order by m.manufacturing_cost asc
limit 1)

union

(SELECT product_code,
        p.product,
        m.manufacturing_cost
FROM fact_manufacturing_cost m
join dim_product p
using(product_code)
order by m.manufacturing_cost desc
limit 1);
```

5



. **AQ Master Wired x1 Ms** has a low manufacturing cost of **0.8654** units and falls under the **Accessories** category, which means it has a **simpler build**.

. **AQ HOME Allin1 Gen 2** has a much higher cost of **263.4207** units and falls under the **Desktop** category, indicating a more **complex** and **expensive build**

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

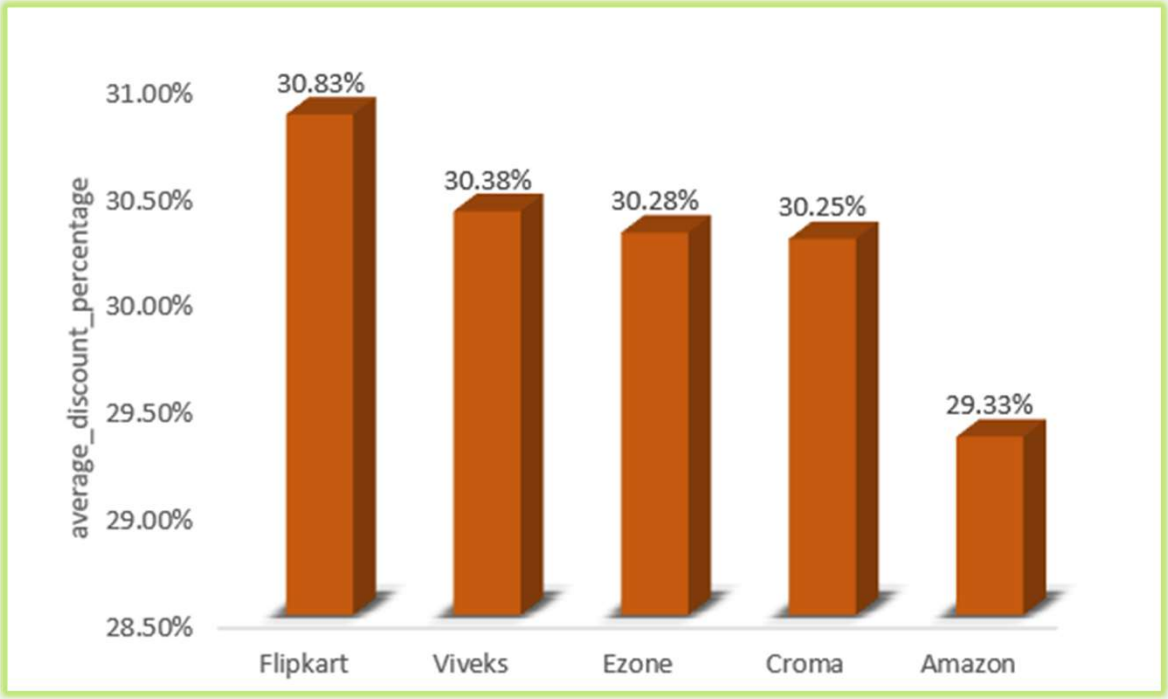
Output:

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

Query:

```
select
	c.customer_code,
	c.customer,
	round(avg(pre.pre_invoice_discount_pct)*100,2) as average_discount_percentage
from dim_customer c
join fact_pre_invoice_deductions pre
using ( customer_code )
where fiscal_year =2021 and c.market = "india"
group by  c.customer_code, c.customer
ORDER BY average_discount_percentage  DESC
limit 5;
```

6



. The data shows the discount percentages offered by different retailers in the **Indian market**.

. **Flipkart** provides the **highest discount** at **30.83%,** making it the most favourable option for customers seeking maximum savings.

. **Amazon** offers the **lowest discount** at **29.33%,** indicating relatively fewer savings compared to other retailers. The remaining fall in between, with discount percentages close to **30%.**

Overall,
the discount rates are competitive, but **Flipkart** stands out as offering the highest discount in this market segment

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:

- Month
- Year
- Gross sales Amount

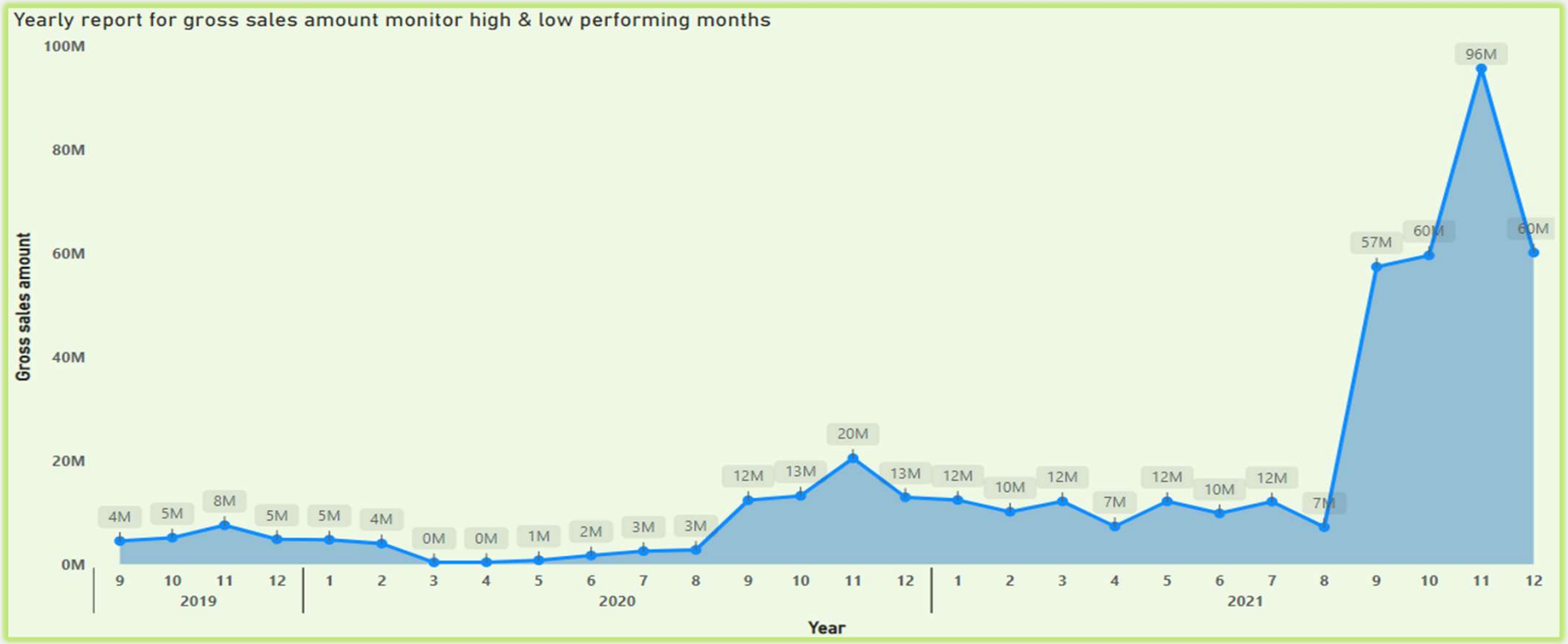
Query:

```
select
        monthname(min(date)) as month,
        year(min(date)) as year,
        round(sum(s.sold_quantity * g.gross_price),2) as Gross_sales_Amount
from fact_sales_monthly s
join dim_customer c
on s.customer_code = c.customer_code
join fact_gross_price g
on s.product_code = g.product_code and
   s.fiscal_year = g.fiscal_year
where c.customer = "Atliq Exclusive"
AND YEAR(date) BETWEEN 2019 AND 2021
group by year(date), month(date)
order by year , month(date) asc;
```

Output:

Month	Year	Gross sales Amount
September	2019	4496259.672
October	2019	5135902.347
November	2019	7522892.561
December	2019	4830404.729
January	2020	4740600.161
February	2020	3996227.766
March	2020	378770.97
April	2020	395035.3535
May	2020	783813.4238
June	2020	1695216.601
July	2020	2551159.158
August	2020	2786648.26
September	2020	12353509.79
October	2020	13218636.2
November	2020	20464999.1
December	2020	12944659.65
January	2021	12399392.98
February	2021	10129735.57
March	2021	12144061.25
April	2021	7311999.955
May	2021	12150225.01
June	2021	9824521.011
July	2021	12092346.32
August	2021	7178707.59
September	2021	57397032.34
October	2021	59610755.9
November	2021	95686586.01
December	2021	60156297.03

7



. In **2019**, **November** saw the highest sales for that year, while **September** recorded the lowest.

. For **2020**, the peak month was **November**, which had the highest sales, and **March** was the month with the lowest sales.

. In **2021**, **November** also had the highest sales, while **August** recorded the lowest.

Every month in **2021** saw an increase in sales compared to the previous year, indicating strong growth throughout that year, totalling approximately **$354.9 million**. Additionally, **2020** had the **minimum sales**, totalling approximately **$27.8 million**.

Notably, every year shows an increase in sales during the month of **November**.

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

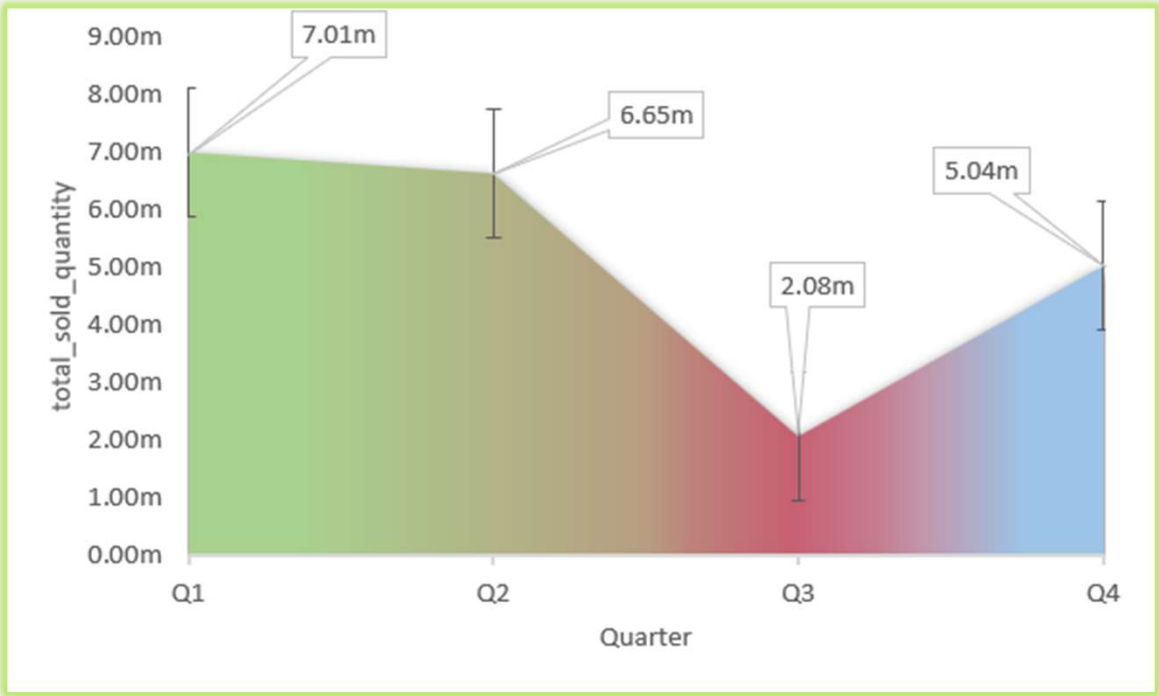
Output:

Quarter	total_sold_quantity
Q1	7005619
Q2	6649642
Q3	2075087
Q4	5042541

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 Quarter,
      sum(sold_quantity) as total_sold_quantity
from fact_sales_monthly
where fiscal_year = 2020
group by  Quarter
order by Quarter asc;
```

8



. **Q1** had the **highest** total sold quantity at **7.01 million**, making it the best-performing quarter.

. **Q2** also performed well, with **6.65 million** sold. However, in **Q3**, there was a significant decline, with sales dropping to **2.08 million**, the lowest of all four quarters.

. Fortunately, **Q4** showed improvement, as sales increased to **5.04 million**.

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

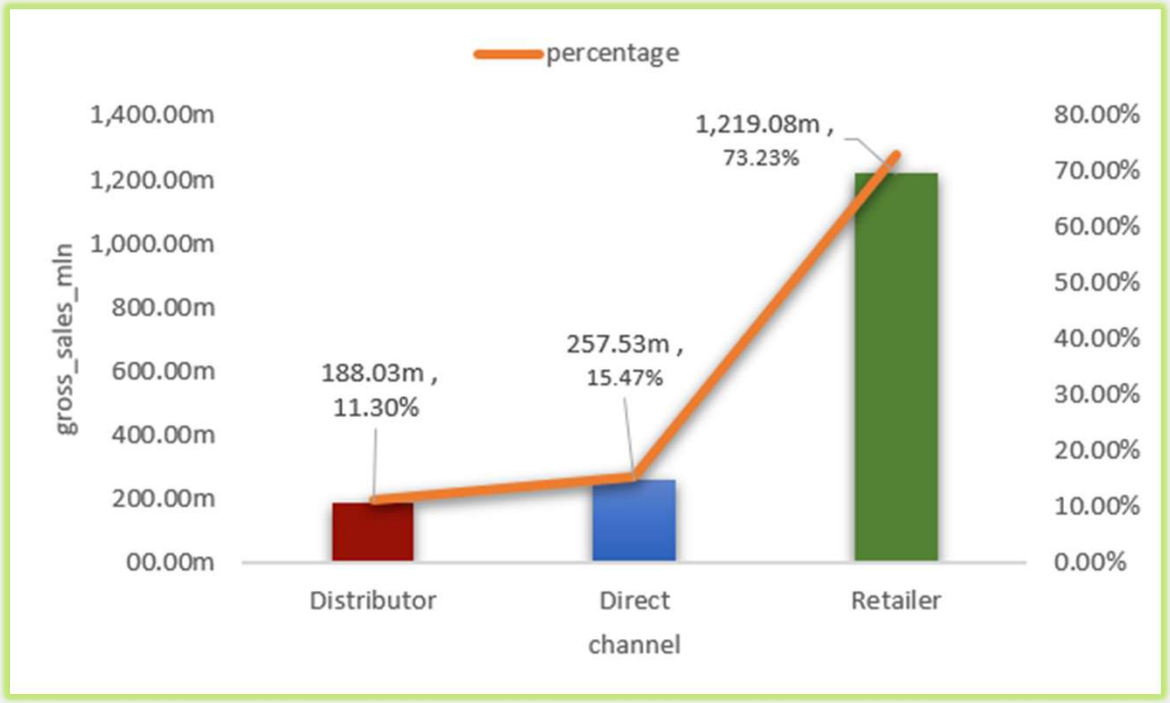
Output:

channel	gross_sales_mln	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30

Query:

```
with cte1 as (
 select
        c.channel ,
       round(sum(s.sold_quantity * g.gross_price)/1000000,2) as gross_sales_mln
from fact_sales_monthly s
join dim_customer c
on s.customer_code = c.customer_code
join fact_gross_price g
on s.product_code = g.product_code and
   s.fiscal_year = g.fiscal_year
   where s.fiscal_year = 2021
   group by c.channel)
select
      channel ,
      gross_sales_mln,
       round(gross_sales_mln / sum(gross_sales_mln) over () *100 ,2) as percentage
      from cte1
      order by  gross_sales_mln desc;
```

9



. In the fiscal year 2021, **AtliQ Hardware's** report shows that :

. The **Retailer channel** had the highest gross sales, reaching **1,219.08 million**, which made up **73.23%** of the total sales.

. The **Direct channel** recorded **257.53 million** in gross sales, contributing **15.47%**. Meanwhile,

. The **Distributor channel** had the lowest sales at **188.03 million**, accounting for **11.30%** of the total

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
- product
- total_sold_quantity
- rank_order

Output:

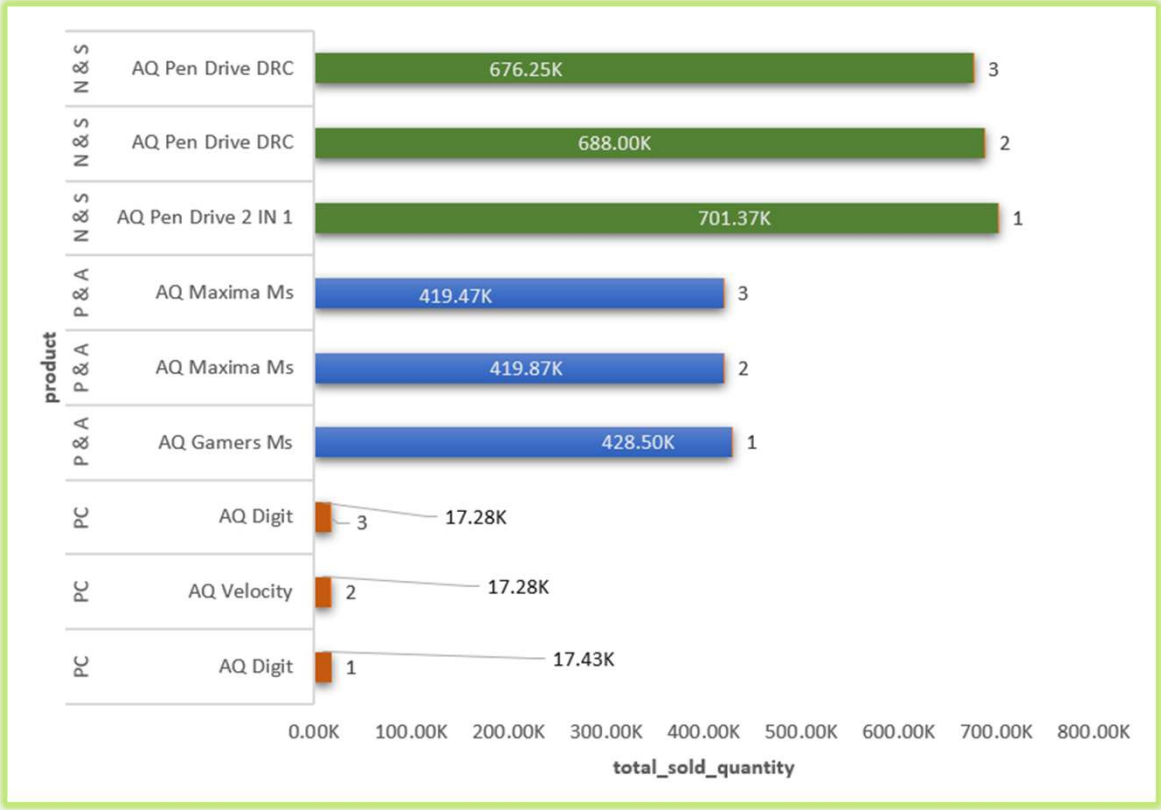
product_code	division	product	total_sold_quantity	rnk
A6720160103	N & S	AQ Pen Drive 2 IN 1	701373	1
A6818160202	N & S	AQ Pen Drive DRC	688003	2
A6819160203	N & S	AQ Pen Drive DRC	676245	3
A2319150302	P & A	AQ Gamers Ms	428498	1
A2520150501	P & A	AQ Maxima Ms	419865	2
A2520150504	P & A	AQ Maxima Ms	419471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

Query:

```
with cte1 as (
              select
       s.product_code,
       p.division,
       p.product,
       sum(s.sold_quantity) as total_sold_quantity
from fact_sales_monthly s
join dim_product p
on s.product_code = p.product_code
where s.fiscal_year = 2021
group by p.product , p.division, s.product_code),

cte2 as (
      select * ,
        rank() over( partition by division order by total_sold_quantity desc ) as rnk
      from  cte1)
select *
from cte2
where rnk<=3 ;
```

10



. In the fiscal year 2021, **AtliQ Hardware's** report shows that : From the top three Division

. the **AQ Pen Drive 2 IN 1** from the **N & S division**, with impressive sales of **701.37K**, ranking **1st** in its division.

. The product with the **lowest** total sold quantity is the **AQ Digit** from the **PC division**, which sold **17.28K** units and is ranked **3rd** in its division.

Thank you