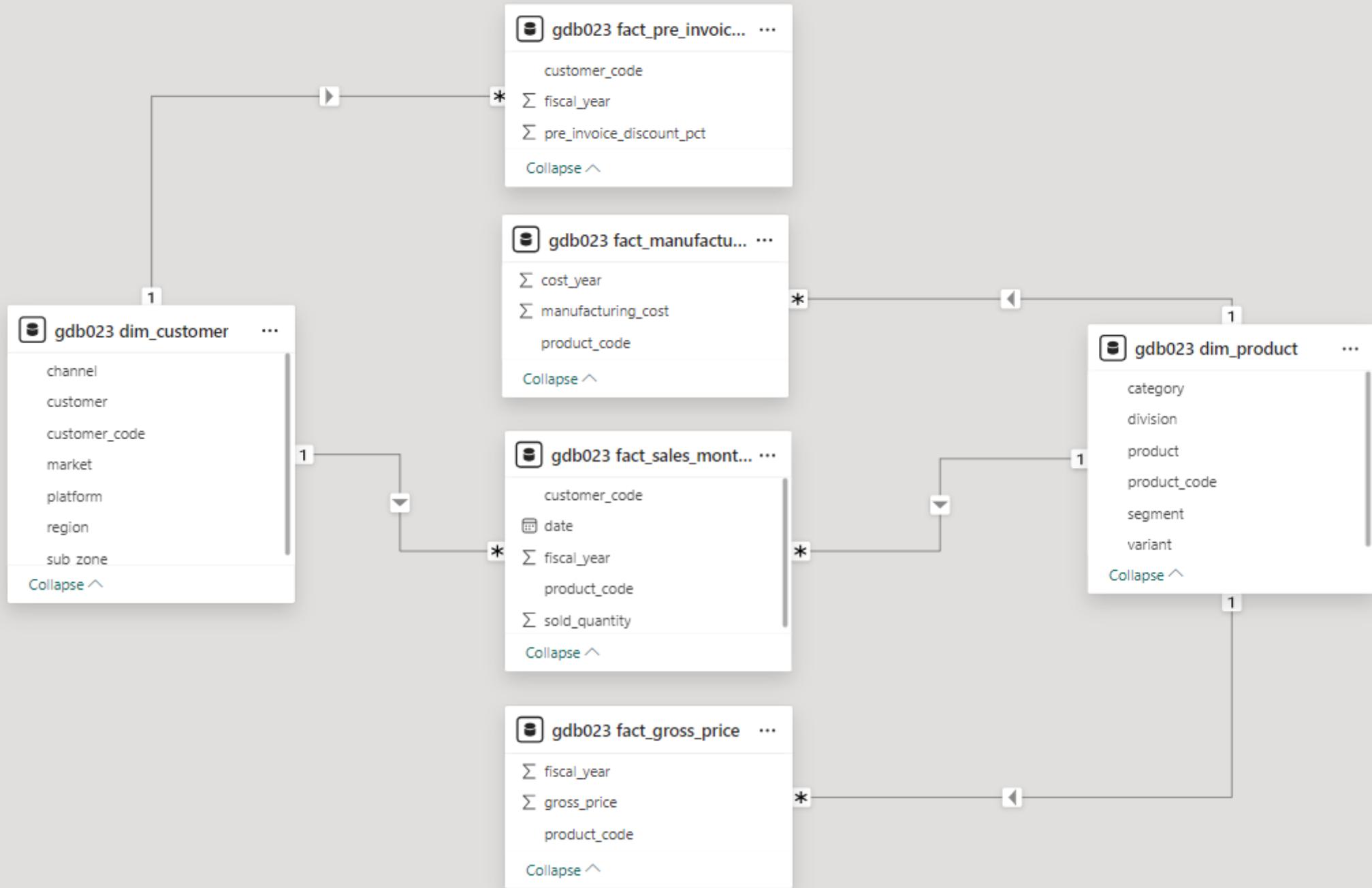


Consumer Goods Ad_Hoc Insights

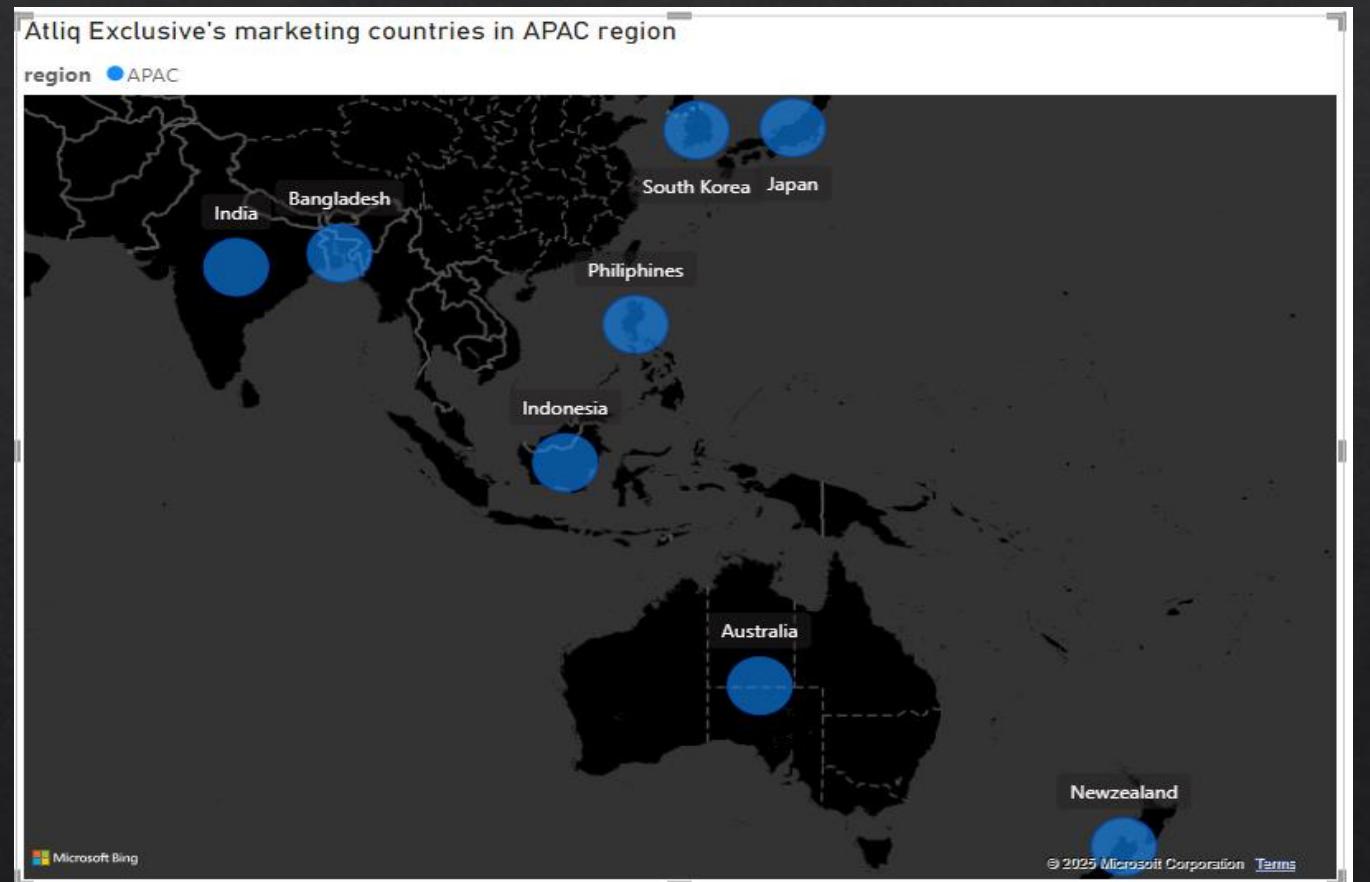




1. Provide the list of markets in which customer 'Atliq Exclusive' operates its business in the APAC region.

```
SELECT DISTINCT market  
FROM gdb023.dim_customer  
WHERE customer = 'Atliq Exclusive'  
AND region = 'APAC';
```

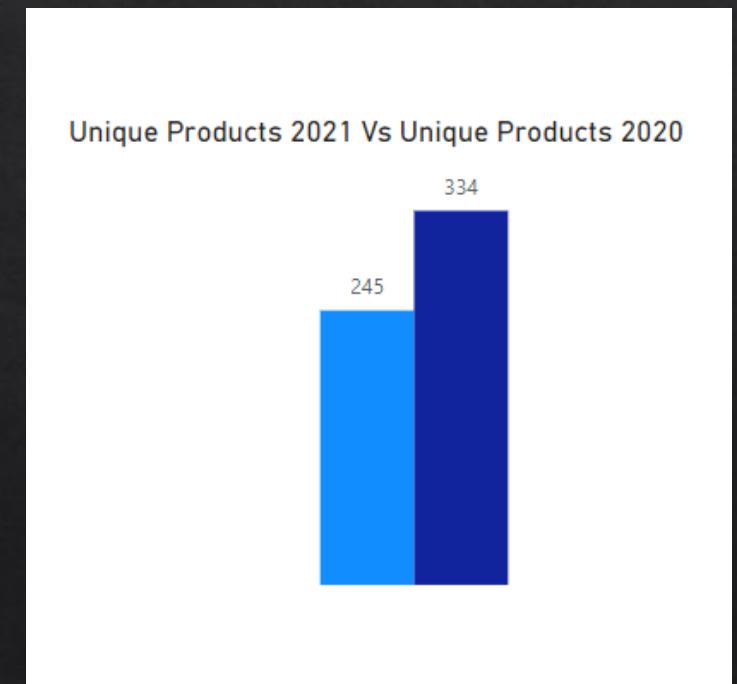
| market |
|-------------|
| India |
| Indonesia |
| Japan |
| Philippines |
| South Korea |
| Australia |
| Newzealand |
| Bangladesh |



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

```
WITH product_counts AS (
    SELECT
        fiscal_year,
        COUNT(DISTINCT product_code) AS unique_products
    FROM gdb023.fact_sales_monthly
    WHERE fiscal_year IN (2020, 2021)
    GROUP BY fiscal_year
)
SELECT
    (SELECT unique_products FROM product_counts WHERE fiscal_year = 2020) AS
    unique_products_2020,
    (SELECT unique_products FROM product_counts WHERE fiscal_year = 2021) AS
    unique_products_2021,
    ROUND(
        ((SELECT unique_products FROM product_counts WHERE fiscal_year = 2021) -
        (SELECT unique_products FROM product_counts WHERE fiscal_year = 2020)) /
        (SELECT unique_products FROM product_counts WHERE fiscal_year = 2020) *
        100, 2
    ) AS percentage_chg;
```

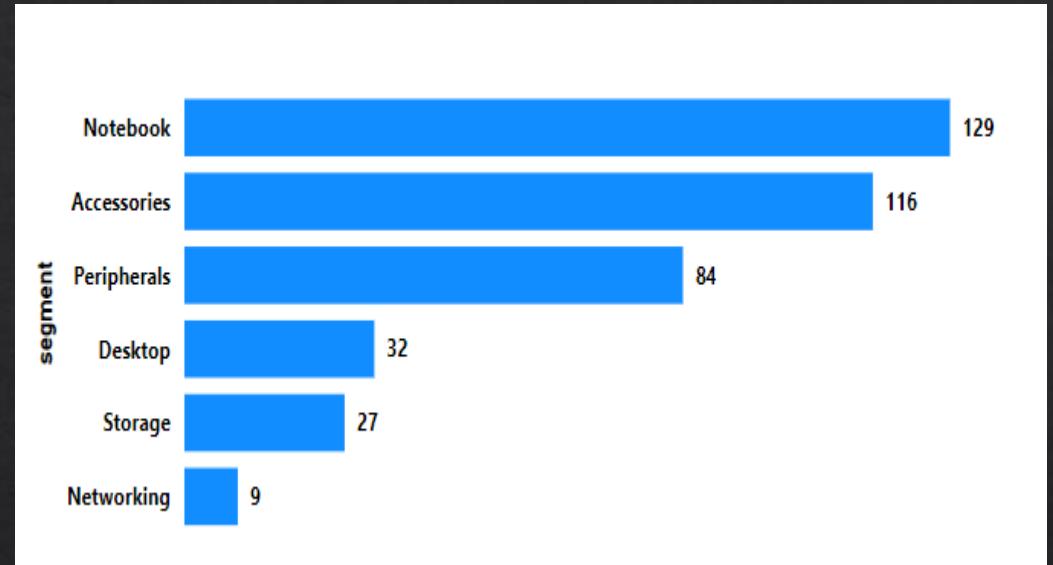
| unique_products_2020 | unique_products_2021 | percentage_chg |
|----------------------|----------------------|----------------|
| 245 | 334 | 36.33 |



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

```
SELECT segment, COUNT(DISTINCT product_code) AS product_count  
FROM gdb023.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 |



Insights:

- Segments: Notebooks, Accessories, Peripherals are showing significant manufacturing growth as compared to desktops, storage, and networking.
- Notebooks, Accessories, and Peripherals constitute 83% of the total manufactured product.

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

```

WITH product_counts AS (
    SELECT
        fs.fiscal_year,
        dp.segment,
        COUNT(DISTINCT fs.product_code) AS product_count
    FROM gdb023.fact_sales_monthly fs
    JOIN gdb023.dim_product dp
        ON fs.product_code = dp.product_code
    WHERE fs.fiscal_year IN (2020, 2021)
    GROUP BY fs.fiscal_year, dp.segment
)
SELECT
    p2020.segment,
    p2020.product_count AS product_count_2020,
    p2021.product_count AS product_count_2021,
    (p2021.product_count - p2020.product_count) AS difference
FROM
    (SELECT * FROM product_counts WHERE fiscal_year = 2020) p2020
JOIN
    (SELECT * FROM product_counts WHERE fiscal_year = 2021) p2021
ON p2020.segment = p2021.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 |

| 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 largest increase in production.
- Storage and Networking are experiencing slower production 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

```
SELECT f.product_code, p.product, f.manufacturing_cost  
FROM gdb023.fact_manufacturing_cost AS f  
JOIN gdb023.dim_product AS p  
ON f.product_code = p.product_code  
WHERE f.manufacturing_cost = (SELECT  
MIN(manufacturing_cost) FROM  
gdb023.fact_manufacturing_cost)  
OR f.manufacturing_cost = (SELECT  
MAX(manufacturing_cost) FROM  
gdb023.fact_manufacturing_cost);
```

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

Insights:

- Mouse: AQ Master wired x1 Ms (Variant: Standard 1) has the lowest manufacturing cost.
- Personal Desktop: AQ Home Allin1 Gen2 (Variant: Plus 3) has the highest manufacturing cost.

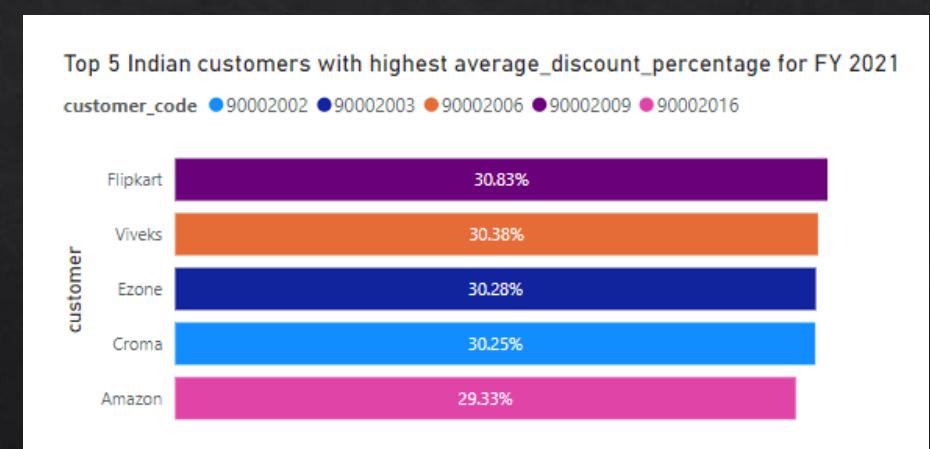
6. Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields: customer_code, customer, average_discount_percentage

```

SELECT
    f.customer_code,
    d.customer,
    AVG(f.pre_invoice_discount_pct) AS average_discount_percentage
FROM gdb023.fact_pre_invoice_deductions AS f
JOIN gdb023.dim_customer AS d
    ON f.customer_code = d.customer_code
WHERE f.fiscal_year = 2021
AND d.market = 'India'
GROUP BY f.customer_code, d.customer
ORDER BY average_discount_percentage DESC
LIMIT 5;

```

| customer_code | customer | average_discount_percentage |
|---------------|----------|-----------------------------|
| 90002009 | Flipkart | 0.30830000 |
| 90002006 | Viveks | 0.30380000 |
| 90002003 | Ezone | 0.30280000 |
| 90002002 | Croma | 0.30250000 |
| 90002016 | Amazon | 0.29330000 |



Insights:

- The largest average pre-invoice discount was given to Flipkart.
- The least average pre-invoice discount was given to Amazon.

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

SELECT

```

MONTH(s.date) AS month,
s.fiscal_year AS year,
ROUND(SUM(s.sold_quantity *  

g.gross_price), 2) AS gross_sales_amount
FROM gdb023.fact_sales_monthly AS s
JOIN gdb023.fact_gross_price AS g
ON s.product_code = g.product_code
JOIN gdb023.dim_customer AS c
ON s.customer_code = c.customer_code
WHERE c.customer = 'Atliq Exclusive'
GROUP BY s.fiscal_year, MONTH(s.date)
ORDER BY s.fiscal_year, MONTH(s.date);

```

79.50M
FY
2020

Insights:

- The lowest Gross sales total for both fiscal years is in March (2020).
- The highest Gross sales total for both fiscal years is in November (2020).
- 73.8% of the total Gross sales figure is in FY 2021.

224.42M
FY
2021

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

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

```
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,  
SUM(sold_quantity) AS total_sold_quantity  
FROM gdb023.fact_sales_monthly  
WHERE fiscal_year = 2020  
GROUP BY Quarter  
ORDER BY total_sold_quantity DESC;
```

| Quarter | total_sold_quantity |
|---------|---------------------|
| Q1 | 7005619 |
| Q2 | 6649642 |
| Q4 | 5042541 |
| Q3 | 2075087 |

Insights:

- **Quarter 1 (Q1) recorded the highest total sold quantity**, making it the most active sales period of FY2020. On the other hand, **Quarter 3 (Q3) had the lowest sales**, indicating a potential seasonal dip in demand.
- **December witnessed the highest sales, while March had the lowest**. This suggests that year-end demand surges, possibly due to festive or financial year-end factors, whereas early Q3 experiences a slowdown.
- **Q1 alone contributed to approximately 34% of the total units sold in FY2020**. This highlights its importance in driving business performance for the year.

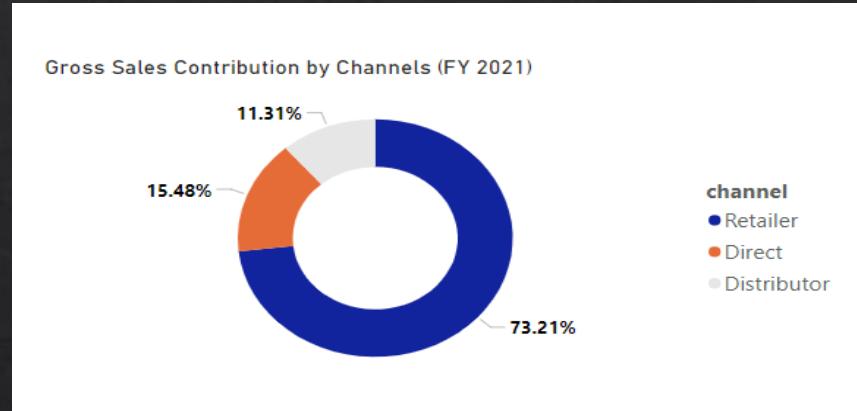
9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields: channel, gross_sales_mln, percentage

```

WITH sales_per_channel AS (
    SELECT
        c.channel,
        ROUND(SUM(s.sold_quantity * g.gross_price) / 1000000, 2) AS gross_sales_mln
    FROM gdb023.fact_sales_monthly AS s
    JOIN gdb023.fact_gross_price AS g
        ON s.product_code = g.product_code
    JOIN gdb023.dim_customer AS c
        ON s.customer_code = c.customer_code
    WHERE s.fiscal_year = 2021
        AND c.channel IN ('Retailer', 'Direct', 'Distributor')
    GROUP BY c.channel
)
SELECT
    channel,
    gross_sales_mln,
    ROUND((gross_sales_mln / SUM(gross_sales_mln) OVER()) * 100, 2) AS percentage
FROM sales_per_channel
ORDER BY gross_sales_mln DESC;

```

| channel | gross_sales_mln | percentage |
|-------------|-----------------|------------|
| Retailer | 1924.17 | 73.22 |
| Direct | 406.69 | 15.48 |
| Distributor | 297.18 | 11.31 |



Insights:

- **Retailer** contributes the most (73.21%, 1924.17M), making it the primary sales channel.
- **Direct Sales** account for 15.48% (406.69M), showing moderate contribution.
- **Distributor** has the lowest share (11.31%, 297.18M), indicating potential for growth.

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

```
WITH product_sales 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 gdb023.fact_sales_monthly AS s
    JOIN gdb023.dim_product AS p
        ON s.product_code = p.product_code
    WHERE s.fiscal_year = 2021
    GROUP BY p.division, s.product_code, p.product
)
SELECT *
FROM product_sales
WHERE rank_order <= 3
ORDER BY division, 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:

- **Top products have multiple variants**, showing strong demand.
- **N & S division** leads with **AQ Pen Drive 2 IN 1 [Premium]** (701K units).
- **P & A** has a mix of gaming & standard products.
- **PC division** shows lower sales but features multiple variants.