

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

```
SELECT market
FROM dim_customer
WHERE customer = 'Atliq Exclusive' AND region = 'APAC'
GROUP BY market
ORDER BY market;
```

Request-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, prcentage_chg

```
WITH cte1 AS (
    SELECT COUNT(DISTINCT(product_code))
    FROM fact_sales_monthly
    WHERE fiscal_year = 2020
),
cte2 AS (
    SELECT COUNT(DISTINCT(product_code))
    FROM fact_sales_monthly
    WHERE fiscal_year = 2021
)
SELECT
    (SELECT * FROM cte1) AS unique_products_2020,
    (SELECT * FROM cte2) AS unique_products_2021,
    ROUND(
        ((SELECT * FROM cte2) - (SELECT * FROM cte1)) * 100.0 / (SELECT * FROM cte1), 2)
AS pct_change;
```

Request-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 dim_product
GROUP BY segment
ORDER BY product_count DESC;
```

Request-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 cte AS (
    SELECT
        p.segment,
        COUNT(DISTINCT CASE WHEN s.fiscal_year = 2020 THEN s.product_code END) AS
product_count_2020,
        COUNT(DISTINCT CASE WHEN s.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 *,
        product_count_2021 - product_count_2020 AS difference
FROM cte;
```

Request-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 fact_manufacturing_cost F
JOIN dim_product P ON F.product_code = P.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;
```

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. The final output contains these fields,

customer_code, customer, average_discount_percentage

```
SELECT c.customer_code,
       c.customer,
       ROUND(AVG(pre_invoice_discount_pct), 2) AS average_discount_percentage
FROM fact_pre_invoice_deductions d
JOIN dim_customer c ON d.customer_code = c.customer_code
WHERE c.market = 'India' AND fiscal_year = 2021
GROUP BY customer_code, c.customer
ORDER BY average_discount_percentage DESC
LIMIT 5;
```

Request-7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month. The final report contains these columns:

Month, Year, Gross sales Amount

```
SELECT
    CONCAT(MONTHNAME(FS.date), ' (', YEAR(FS.date), ')') AS 'Month',
    FS.fiscal_year,
    ROUND(SUM(G.gross_price * FS.sold_quantity), 2) AS Gross_sales_Amount
FROM fact_sales_monthly FS
JOIN dim_customer C ON FS.customer_code = C.customer_code
JOIN fact_gross_price G ON FS.product_code = G.product_code
WHERE C.customer = 'Atliq Exclusive'
GROUP BY Month, FS.fiscal_year
ORDER BY FS.fiscal_year;
```

Request-8. In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields:

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'
        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;
```

Request-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 temp_table AS (  
    SELECT c.channel,  
           SUM(s.sold_quantity * g.gross_price) AS total_sales  
    FROM fact_sales_monthly s  
    JOIN fact_gross_price g ON s.product_code = g.product_code  
    JOIN dim_customer c ON s.customer_code = c.customer_code  
    WHERE s.fiscal_year = 2021  
    GROUP BY c.channel  
)  
SELECT  
    channel,  
    ROUND(total_sales / 1000000, 2) AS gross_sales_in_millions,  
    ROUND(total_sales / (SUM(total_sales) OVER()) * 100, 2) AS percentage  
FROM temp_table;
```

Request-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 temp_table AS (  
    SELECT  
        division,  
        s.product_code,  
        CONCAT(p.product, ' (' , p.variant, ')') AS product,  
        SUM(sold_quantity) AS total_sold_quantity,
```

```
rank_order      RANK() OVER (PARTITION BY division ORDER BY SUM(sold_quantity) DESC) AS

FROM fact_sales_monthly s

JOIN dim_product p ON s.product_code = p.product_code

WHERE fiscal_year = 2021

GROUP BY division, s.product_code, p.product, p.variant

)

SELECT * FROM temp_table

WHERE rank_order IN (1, 2, 3);
```