

-- Request 1: List distinct markets for customer "Atliq Exclusive" in APAC region

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

-- Request 2: Count unique products sold in 2020 and 2021, with percentage change

WITH unique_product_count 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
    unique_products_2020,
    unique_products_2021,
    CONCAT(ROUND(((unique_products_2021 - unique_products_2020) * 1.0 /
    unique_products_2020) * 100, 2), '%') AS percentage_chg
FROM unique_product_count;
```

-- Request 3: Count number of distinct products by segment, ordered by product count descending

```
SELECT
    COUNT(DISTINCT product_code) AS product_count,
    segment
FROM dim_product
GROUP BY segment
```

ORDER BY product_count DESC;

-- Request 4: Count unique products sold in 2020 and 2021 by segment, ordered by difference descending

WITH unique_product AS

(

SELECT

b.segment AS segment,

COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN a.product_code END) AS
product_count_2020,

COUNT(DISTINCT CASE WHEN fiscal_year = 2021 THEN a.product_code END) AS
product_count_2021

FROM fact_sales_monthly AS a

INNER JOIN dim_product AS b ON a.product_code = b.product_code

GROUP BY b.segment

)

SELECT

segment,

product_count_2020,

product_count_2021,

(product_count_2021 - product_count_2020) AS difference

FROM unique_product

ORDER BY difference DESC;

-- Request 5: Retrieve products with maximum and minimum manufacturing costs

SELECT

m.product_code,

p.product,

m.manufacturing_cost

FROM

```

fact_manufacturing_cost AS m
INNER JOIN dim_product AS p ON m.product_code = p.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 manufacturing_cost DESC;

```

-- Request 6: Calculate average pre-invoice discount percentage for customers in India for fiscal year 2021

```

SELECT
    f.customer_code,
    c.customer,
    ROUND(AVG(f.pre_invoice_discount_pct) * 100, 2) AS average_discount_percentage
FROM
    fact_pre_invoice_deductions AS f
INNER JOIN dim_customer AS c ON f.customer_code = c.customer_code
WHERE
    f.fiscal_year = 2021
    AND c.market = 'India'
GROUP BY
    f.customer_code, c.customer
ORDER BY
    average_discount_percentage DESC
LIMIT 5;

```

-- Request 7: Calculate gross sales amount in millions for customer 'Atliq Exclusive' by month and year

```
SELECT
    MONTHNAME(date) AS month_name,
    YEAR(date) AS year_,
    CONCAT('$', ROUND(SUM(a.sold_quantity * b.gross_price) / 1000000, 2)) AS
gross_sales_amount_millions
FROM
    fact_sales_monthly AS a
INNER JOIN
    fact_gross_price AS b ON b.product_code = a.product_code AND b.fiscal_year = a.fiscal_year
INNER JOIN
    dim_customer AS c ON c.customer_code = a.customer_code
WHERE
    c.customer = 'Atliq Exclusive'
GROUP BY
    month_name, year_
ORDER BY
    year_;
```

-- Request 8: Calculate total sold quantity per quarter for fiscal year 2020

```
WITH QuarterlySales AS (
    SELECT
        CASE
            WHEN MONTH(date) BETWEEN 9 AND 11 THEN 'Q1'
            WHEN MONTH(date) IN (12, 1, 2) THEN 'Q2'
            WHEN MONTH(date) BETWEEN 3 AND 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
)
SELECT
    Quarter,
    total_sold_quantity
FROM
    QuarterlySales
ORDER BY
    total_sold_quantity DESC;

```

-- Request 9: Calculate gross sales in millions and percentage by channel for fiscal year 2021

```

WITH gross_sales AS
(
    SELECT
        c.channel AS channel_,
        ROUND(SUM(b.gross_price * a.sold_quantity) / 1000000, 2) AS gross_sales_million
    FROM
        fact_sales_monthly AS a
    LEFT JOIN
        fact_gross_price AS b ON a.product_code = b.product_code AND a.fiscal_year =
        b.fiscal_year
    LEFT JOIN
        dim_customer AS c ON a.customer_code = c.customer_code
    WHERE
        a.fiscal_year = 2021

```

```

GROUP BY
    c.channel
)
SELECT
    channel_,
    CONCAT('$', gross_sales_million) AS gross_sales_million,
    CONCAT(ROUND(gross_sales_million / SUM(gross_sales_million) OVER() * 100, 2), '%') AS
percentage
FROM
    gross_sales
ORDER BY
    percentage DESC;

```

-- Request 10: Retrieve top 3 selling products per division for fiscal year 2021

```

WITH top_sold_products AS (
    SELECT
        b.division AS division,
        b.product_code AS product_code,
        b.product AS product,
        SUM(a.sold_quantity) AS total_sold_quantity
    FROM
        fact_sales_monthly AS a
    INNER JOIN
        dim_product AS b ON a.product_code = b.product_code
    WHERE
        a.fiscal_year = 2021
    GROUP BY
        b.division, b.product_code, b.product
    ORDER BY
        total_sold_quantity DESC
)

```

```
),  
top_sold_per_division AS (  
    SELECT  
        division,  
        product_code,  
        product,  
        total_sold_quantity,  
        DENSE_RANK() OVER(PARTITION BY division ORDER BY total_sold_quantity DESC) AS  
rank_order  
    FROM  
        top_sold_products  
)  
SELECT  
    *  
FROM  
    top_sold_per_division  
WHERE  
    rank_order <= 3;
```