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

```
select customer,market,region
from
dim_customer where region = 'APAC'
and customer = 'Atliq Exclusive';
```

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

-- 02 --

```
WITH unique_products_2020 AS (
   SELECT COUNT(DISTINCT product_code) AS unique_products_2020
   FROM fact_sales_monthly
   WHERE fiscal_year = 2020
),
unique_products_2021 AS (
   SELECT COUNT(DISTINCT product_code) AS unique_products_2021
   FROM fact_sales_monthly
   WHERE fiscal_year = 2021
)
SELECT
   u2020.unique_products_2020,
   u2021.unique_products_2021,
   ROUND(((u2021.unique_products_2021 - u2020.unique_products_2020) /
CAST(u2020.unique_products_2020 AS FLOAT)) * 100, 2) AS percentage_change
FROM
```

```
    unique_products_2020 u2020
CROSS JOIN
    unique_products_2021 u2021;

-- 03 --


select distinct(count(product)) as product_count,
 segment from dim_product
 group by segment
 order by product_count;


 -- 04 --


WITH product_counts AS (
    SELECT
        dp.segment,
        COUNT(DISTINCT CASE WHEN fms.fiscal_year = 2020 THEN fms.product_code END) AS
product_count_2020,
        COUNT(DISTINCT CASE WHEN fms.fiscal_year = 2021 THEN fms.product_code END) AS
product_count_2021
    FROM
        fact_sales_monthly fms
    JOIN
        dim_product dp ON fms.product_code = dp.product_code
    GROUP BY
        dp.segment
```

```
)
SELECT
   segment,
   product_count_2020,
   product_count_2021,
   product_count_2021 - product_count_2020 AS difference
FROM
   product_counts
ORDER BY
   difference DESC
LIMIT 1;



-- 05 --

SELECT
   dp.product_code,
   dp.product,
   fmc.manufacturing_cost
FROM
   fact_manufacturing_cost fmc
JOIN
   dim_product dp ON fmc.product_code = dp.product_code
WHERE
   fmc.manufacturing_cost  = (SELECT MAX(manufacturing_cost) FROM fact_manufacturing_cost)
   OR
   fmc.manufacturing_cost = (SELECT MIN(manufacturing_cost)  FROM fact_manufacturing_cost);

-- 06 --
```

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

select * from fact_sales_monthly;



-- 07 --



SELECT
    EXTRACT(MONTH FROM fsm.date) AS month,
    EXTRACT(YEAR FROM fsm.date) AS year,
    ROUND(SUM(fgp.gross_price * fsm.sold_quantity), 2) AS gross_sales_amount
FROM
```

```
    fact_sales_monthly fsm
JOIN
    dim_customer dc ON fsm.customer_code = dc.customer_code
JOIN
    fact_gross_price fgp ON fsm.product_code = fgp.product_code
WHERE
    dc.customer = 'Atliq Exclusive'
GROUP BY
    year, month
ORDER BY
    year, month;



-- 08 --



WITH sales_quarters AS (
    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
        fact_sales_monthly
    WHERE
        fiscal_year = 2020
```

```
    GROUP BY
        Quarter
)
SELECT
    Quarter,
    total_sold_quantity
FROM
    sales_quarters
ORDER BY
    total_sold_quantity DESC
LIMIT 1;

-- 09 --

WITH sales_data AS (
    SELECT
        dc.channel,
        ROUND(SUM(fgp.gross_price * fsm.sold_quantity) / 1000000, 2) AS gross_sales_mln
    FROM
        fact_sales_monthly fsm
    JOIN
        dim_customer dc ON fsm.customer_code = dc.customer_code
    JOIN
        fact_gross_price fgp ON fsm.product_code = fgp.product_code
    WHERE
        fsm.fiscal_year = 2021
    GROUP BY
        dc.channel
), total_sales AS (
```

```
    SELECT SUM(gross_sales_mln) AS total_gross_sales FROM sales_data
)
SELECT
    sd.channel,
    sd.gross_sales_mln,
    ROUND((sd.gross_sales_mln / ts.total_gross_sales) * 100, 2) AS percentage
FROM
    sales_data sd, total_sales ts
ORDER BY
    gross_sales_mln DESC
LIMIT 1;

select * from fact_sales_monthly;

-- 10 --

WITH product_sales AS (
    SELECT
        dp.division,
        fsm.product_code,
        dp.product,
        SUM(fsm.sold_quantity) AS total_sold_quantity,
        RANK() OVER (PARTITION BY dp.division ORDER BY SUM(fsm.sold_quantity) DESC) AS rank_order
    FROM
        fact_sales_monthly fsm
    JOIN
        dim_product dp ON fsm.product_code = dp.product_code
    WHERE
        fsm.fiscal_year = 2021
```

```
    GROUP BY
        dp.division, fsm.product_code, dp.product
)
SELECT
    division,
    product_code,
    product,
    total_sold_quantity,
    rank_order
FROM
    product_sales
WHERE
    rank_order <= 3
ORDER BY
    division, rank_order;
```