Requests:

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

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

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 unique_prod_2020 AS (
        SELECT
    COUNT (DISTINCT (product_code)) AS prod_2020
        FROM fact_sales_monthly
  WHERE fiscal_year = 2020),
unique_prod_2021 AS (
        SELECT
                COUNT (DISTINCT (product_code)) AS prod_2021
  FROM fact_sales_monthly
  WHERE fiscal_year = 2021)
        SELECT
                prod_2020,
    prod_2021,
    ROUND((((prod_2021 - prod_2020)*100)/prod_2020),2) AS percentage_chg
        FROM unique_prod_2020, unique_prod_2021;
```

3. Provide a report with all the unique product counts for each segment and short them in descending order of product counts. The final output contains 2 fields,
segment
product_count

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

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 unique_prod_2020 as
(select p.segment, count(distinct(s.product_code)) as product_count_2020 from dim_product p
join fact_sales_monthly s on
s.product_code=p.product_code
where s.fiscal_year=2020
group by p.segment),
unique_prod_2021 as
(select p.segment, count(distinct(s.product_code)) as product_count_2021 from dim_product p
join fact_sales_monthly s on
s.product_code=p.product_code
where s.fiscal_year=2021
group by p.segment)
select unique_prod_2020.segment, product_count_2020, product_count_2021,
abs(unique_prod_2020.product_count_2020-unique_prod_2021.product_count_2021) as difference
from unique_prod_2020 join unique_prod_2021
on unique_prod_2020.segment=unique_prod_2021.segment
order by difference desc;
```

5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,
product_code
product
manufacturing_cost

```
with unique_prod_2020 as
(select p.segment, count(distinct(s.product_code)) as product_count_2020 from dim_product p
join fact_sales_monthly s on
s.product_code=p.product_code
where s.fiscal_year=2020
group by p.segment),
unique_prod_2021 as
(select p.segment, count(distinct(s.product_code)) as product_count_2021 from dim_product p
join fact_sales_monthly s on
s.product_code=p.product_code
where s.fiscal_year=2021
group by p.segment)
select unique_prod_2020.segment, product_count_2020, product_count_2021,
abs(unique_prod_2020.product_count_2020-unique_prod_2021.product_count_2021) as
difference
from unique_prod_2020 join unique_prod_2021
on unique_prod_2020.segment=unique_prod_2021.segment
order by difference desc;
```

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)*100,2) as average_discount_pct
from dim_customer c
join fact_pre_invoice_deductions d
using(customer_code)
where d.fiscal_year= 2021 and c.market= "India"
group by c.customer_code,c.customer
order by average_discount_pct desc limit 5;
```

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 monthname(s.date) as month ,s.fiscal_year,
round(sum(g.gross_price*sold_quantity),2) as gross_sales_amt
from fact_sales_monthly s
join fact_gross_price g
using(product_code)
join dim_customer c
using(customer_code)
where customer="Atliq Exclusive"
group by monthname(s.date), s.fiscal_year
order by fiscal_year;
```

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'
    else 'Q4'
end as Quarter, sum(sold_quantity) as total_sold_qty
from fact_sales_monthly
where fiscal_year=2020
group by Quarter
order by total_sold_qty desc;
```

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 cte1 as (select channel,
round(sum(gross_price*sold_quantity)/100000,2) as gross_sales_mln
from fact_sales_monthly
join dim_customer
using(customer_code)
join fact_gross_price
using(product_code)
where fact_sales_monthly.fiscal_year=2021
group by channel)
select channel, gross_sales_mln,
round((gross_sales_mln/(select sum(gross_sales_mln)from cte1))*100,2)
as percentage from cte1
order by gross_sales_mln desc;
```

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 cte1 as (select p.division, p.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 dim_product p
join fact_sales_monthly s
using(product_code)
where s.fiscal_year=2021
group by p.division, s.product_code,p.product)
select* from cte1
where rank_order in(1,2,3) order by division, rank_order;
```