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 adhoc 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 customer="Atliq Exclusive"
and region="APAC";

-- # 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 x as(
SELECT count(distinct(product_code)) as unique_products_2020
from fact_sales_monthly
WHERE fiscal_year=2020 ),
y as(
SELECT count(distinct(product_code)) as  unique_products_2021
from fact_sales_monthly
WHERE fiscal_year=2021)
select x.unique_products_2020,
       y.unique_products_2021 ,

round(((y.unique_products_2021-x.unique_products_2020)*100/x.unique_pro
ducts_2020),2) as percentage_chg
FROM x,y
 ;
-- # 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;

-- # 4. Follow-up: Which segment had the most increase in unique
products in 2021 vs 2020? The final output contains these fields,
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```sql
-- # segment
-- # product_count_2020
-- # product_count_2021
-- # difference

WITH x as(
SELECT p.segment,count(distinct(s.product_code)) as products_count_2020
from fact_sales_monthly s
join dim_product p on p.product_code=s.product_code
WHERE s.fiscal_year=2020
group by p.segment ),
y as(
SELECT p.segment,count(distinct(s.product_code)) as
products_count_2021
from fact_sales_monthly s
join dim_product p on p.product_code=s.product_code
WHERE s.fiscal_year=2021
group by p.segment)
select x.segment,products_count_2020,products_count_2021,
       abs(y.products_count_2021-x.products_count_2020) as difference
FROM x,y ;

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

SELECT p.product_code,
       p.product,
       m.manufacturing_cost
from dim_product p
join fact_manufacturing_cost m
     on p.product_code=m.product_code
;

-- # 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
```

```sql
select c.customer_code,
       c.customer,
       avg(i.pre_invoice_discount_pct) as average_discount_percentage
from fact_pre_invoice_deductions i
join dim_customer c
using (customer_code)
WHERE i.pre_invoice_discount_pct>(select avg(pre_invoice_discount_pct)
from fact_pre_invoice_deductions) and
     i.fiscal_year=2021 and
     c.market="India"
group by c.customer_code,
         c.customer
order by average_discount_percentage 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 ,
       sum(round(g.gross_price*s.sold_quantity,2)) as
Gross_price_Amount
from fact_gross_price g
join fact_sales_monthly s
     on s.product_code=g.product_code
join dim_customer c
     on c.customer_code=s.customer_code
where customer="Atliq Exclusive"
group by month,s.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
```

```sql
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_quantity
from fact_sales_monthly
where fiscal_year=2020
group by Quarter
order by total_sold_quantity 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 x as(
select
     c.channel,
      round((sum(s.sold_quantity*g.gross_price)/1000000),2) as
gross_sales_mln
from dim_customer c
join fact_sales_monthly s
     on c.customer_code=s.customer_code
join fact_gross_price g
     on g.product_code=s.product_code
where s.fiscal_year=2021
group by c.channel)
select channel,
       gross_sales_mln,
       round(gross_sales_mln*100/sum(gross_sales_mln) over(),2) as
percentage
from x;

-- # 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
```

```sql
-- # product_code
-- # codebasics.io
-- # product
-- # total_sold_quantity
-- # rank_order

with x 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 fiscal_year=2021
group by p.division,p.product_code,p.product)
     select * from x
     where rank_order<=3;
```