ATLIQ RESUME CHALLENGE

Atliq Hardwares (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too.

However, the management noticed that they do not get enough insights to make quick and smart data-informed decisions. They want to expand their data analytics team by adding several junior data analysts.

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 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 unique_products_2020, unique_products_2021, round(((unique_products_2021 - unique_products_2020)/unique_products_2020*100),2) as percentage_chg from unique_products_2020 join unique_products_2021;
   ```

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,
   segment
   product_count_2020

product_count_2021
difference

```
with product_2020 as ( select dim_product.segment,
count(distinct(dim_product.product_code)) as product_count_2020

from dim_product inner join fact_sales_monthly on
dim_product.product_code=fact_sales_monthly.product_code where
fiscal_year="2020" group by segment

order by product_count_2020 desc),

product_2021 as ( select dim_product.segment,
count(distinct(dim_product.product_code)) as product_count_2021

from dim_product inner join fact_sales_monthly on
dim_product.product_code=fact_sales_monthly.product_code where
fiscal_year="2021" group by segment

order by product_count_2021 desc)

select
product_2020.segment,product_2020.product_count_2020,product_2021.product_cou
nt_2021,(product_2021.product_count_2021-product_2020.product_count_2020) as
difference from product_2020 inner join

product_2021 on product_2020.segment=product_2021.segment;
```

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 dim_product.product, dim_product.product_code ,
fact_manufacturing_cost.manufacturing_cost as manufacturing_cost from
dim_product inner join fact_manufacturing_cost

on dim_product.product_code=fact_manufacturing_cost.product_code where
fact_manufacturing_cost.manufacturing_cost = (select max(manufacturing_cost) from

fact_manufacturing_cost)

union

select dim_product.product, dim_product.product_code ,
fact_manufacturing_cost.manufacturing_cost as manufacturing_cost from
dim_product inner join fact_manufacturing_cost
```

```
on dim_product.product_code=fact_manufacturing_cost.product_code where
fact_manufacturing_cost.manufacturing_cost = (select min(manufacturing_cost) from

fact_manufacturing_cost)
```

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 dim_customer.customer, dim_customer.customer_code,
round(avg(fact_pre_invoice_deductions.pre_invoice_discount_pct)*100,2) as
avg_discount_percentage from dim_customer inner join

fact_pre_invoice_deductions on
dim_customer.customer_code=fact_pre_invoice_deductions.customer_code where
fiscal_year="2021" and market="India"

group by customer_code order by avg_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 month(date) as month, year(date) as year ,
round(sum(fact_gross_price.gross_price*fact_sales_monthly.sold_quantity),2) as
Gross_sales_amount from

fact_gross_price inner join fact_sales_monthly on
fact_gross_price.product_code=fact_sales_monthly.product_code inner join dim_customer
on

dim_customer.customer_code=fact_sales_monthly.customer_code where customer="Atliq
Exclusive" group by month,year order by 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 "Quarter 1 of 2020"

when month(date) in (12,1,2) then "Quarter 2 of 2020"

when month(date) in (3,4,5) then "Quarter 3 of 2020"

when month(date) in (6,7,8) then "Quarter 4 of 2020"

end as Quarter,

sum(sold_quantity) as total_sales from fact_sales_monthly where fiscal_year="2020"
group  by Quarter order by total_sales 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 total_sales_mln as ( select dim_customer.channel,
round(sum(fact_gross_price.gross_price*fact_sales_monthly.sold_quantity)/100000,2
) as gross_sales_mln from dim_customer inner join fact_sales_monthly on
dim_customer.customer_code=fact_sales_monthly.customer_code join
fact_gross_price

on fact_gross_price.product_code=fact_sales_monthly.product_code where
fact_sales_monthly.fiscal_year = "2021" group by channel order by gross_sales_mln
desc)

select * , gross_sales_mln*100/sum(gross_sales_mln) over () as percentage from
total_sales_mln;
```

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
codebasics.io
product

total_sold_quantity
rank_order

```
with total_sold_quantity as (select dim_product.division, dim_product.product_code,
dim_product.product, sum(fact_sales_monthly.sold_quantity)

as total_sold_quantity from dim_product inner join fact_sales_monthly

on dim_product.product_code=fact_sales_monthly.product_code where
fiscal_year="2021"

group by dim_product.division, dim_product.product_code, dim_product.product),

top_rank as ( select *, rank() over (partition by division order by total_sold_quantity
desc ) as ranking from total_sold_quantity)

select * from top_rank where ranking<=3;
```