RESUME PROJECT

Problem Statement: 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. Tony Sharma, their data analytics director wanted to hire someone who is good at both tech and soft skills. Hence, he decided to conduct a SQL challenge which will help him understand both the skills.

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

```
SELECT distinct(market)
FROM gdb023.dim_customer
where  customer="Atliq Exclusive" and region="APAC" ;
```

	market
▶	India
	Indonesia
	Japan
	Philiphines
	South Korea
	Australia
	Newzealand
	Bangladesh

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 as(select fiscal_year,count(distinct(product_code))as distinct_product
from fact_sales_monthly
group by fiscal_year)


select up_20.distinct_product as unique_products_2020,
up_21.distinct_product as unique_products_2021,
((up_21.distinct_product-up_20.distinct_product)*100/up_20.distinct_product)as pct
from unique_products up_20
cross join unique_products up_21
where up_20.fiscal_year=2020 and up_21.fiscal_year=2021
```

unique_products_2020	unique_products_2021	pct
245	334	36.3265

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 unique_product_Count
from dim_product
group by segment
order by 2 desc
```

	segment	unique_product_Count
▶	Notebook	129
	Accessories	116
	Peripherals	84
	Desktop	32
	Storage	27
	Networking	9

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 sales_1 as(select p.segment,count(distinct(p.product_code))as unique_products_2020
from dim_product p
join fact_sales_monthly s
on p.product_code=s.product_code
where s.fiscal_year=2020
group by p.segment),
sales_2 as(select p.segment,count(distinct(p.product_code))as unique_products_2021
from dim_product p
join fact_sales_monthly s
on p.product_code=s.product_code
where s.fiscal_year=2021
group by p.segment)

select a.segment,unique_products_2021,unique_products_2020,(unique_products_2021-unique_products_2020)as difference
from sales_1 a
join sales_2 b
on a.segment=b.segment
```

	segment	unique_products_2021	unique_products_2020	difference
▶	Accessories	103	69	34
	Desktop	22	7	15
	Networking	9	6	3
	Notebook	108	92	16
	Peripherals	75	59	16
	Storage	17	12	5

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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 m.product_code,p.product,m.manufacturing_cost
from fact_manufacturing_cost m
join dim_product p
on p.product_code=m.product_code
where m.manufacturing_cost in(select max(manufacturing_cost)
from fact_manufacturing_cost)
UNION
select m.product_code,p.product,m.manufacturing_cost
from fact_manufacturing_cost m
join dim_product p
on p.product_code=m.product_code
where m.manufacturing_cost in(select mIN(manufacturing_cost)
from fact_manufacturing_cost)
```

	product_code	product	manufacturing_cost
▶	A6120110206	AQ HOME Allin1 Gen 2	240.5364
	A2118150101	AQ Master wired x1 Ms	0.8920

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 pinv_discount
from dim_customer c
join fact_pre_invoice_deductions pre
on c.customer_code=pre.customer_code
where market="India" and fiscal_year=2021
Group by c.customer_code,c.customer
order by pinv_discount desc
limit 5
```

customer_code	customer	pinv_discount
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33

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 year(s.date)as year,monthname(s.date)as month_name,month(s.date)as m_number,concat(round(sum(g.gross_price*s.sold_quantity)/1000000,2),"M")as gross_Sales_mln
from fact_sales_monthly s
join fact_gross_price g
on s.product_code=g.product_code
join dim_customer c
on s.customer_code=c.customer_code
where customer="Atliq Exclusive"
Group by 1,2,3
order by 1,3;
```

year	month_name	m_number	gross_Sales_mln
2019	September	9	9.09M
2019	October	10	10.38M
2019	November	11	15.23M
2019	December	12	9.76M
2020	January	1	9.58M
2020	February	2	8.08M
2020	March	3	0.77M
2020	April	4	0.80M
2020	May	5	1.59M
2020	June	6	3.43M
2020	July	7	5.15M
2020	August	8	5.64M
2020	September	9	19.53M
2020	October	10	21.02M
2020	November	11	32.25M
2020	December	12	20.41M
2021	January	1	19.57M
2021	February	2	15.99M
2021	March	3	19.15M
2021	April	4	11.48M
2021	May	5	19.20M
2021	June	6	15.46M
2021	July	7	19.04M
2021	August	8	11.32M

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

```
with temp as(SELECT date,month(date_add(date,interval 4 month))as period,fiscal_year,sold_quantity
 FROM gdb023.fact_sales_monthly)

 select
 case
 when  period/3<=1 then "Q1"
when period/3<=2 and period>1 then "Q2"
 when period/3<=3 and period>2 then "Q3"
 when period/3<=4 and period>3 then "Q4"
 END  Quarter,
  round(sum(sold_quantity)/1000000,2) as total_sold_quanity_in_millions FROM temp
WHERE fiscal_year = 2020
GROUP BY quarter
ORDER BY total_sold_quanity_in_millions DESC
```

Quarter	total_sold_quanity_in_millions
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

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 temp as(SELECT c.channel,SUM(s.sold_quantity*g.gross_price)as total_sales
 FROM gdb023.dim_customer  c
 join fact_sales_monthly s
 on c.customer_code=s.customer_code
 join  fact_gross_price g
 on s.product_code=g.product_code
 where s.fiscal_year=2021
 Group by 1
 order by total_sales desc)


 select channel,
 round(total_Sales/1000000,2)as gross_sales_mln,
 round(total_Sales/sum(total_Sales) OVER()*100,2) as pct
 from temp
```

channel	gross_sales_mln	pct
Retailer	1924.17	73.22
Direct	406.69	15.47
Distributor	297.18	11.31

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.

```
with temp as(SELECT p.division,p.product_code,p.product,sum(s.sold_quantity)as total_sold_quantity,
rank() over(partition by division order by sum(s.sold_quantity) desc)as rank_order
 FROM gdb023.dim_product p
 join fact_sales_monthly s
 on p.product_code=s.product_code
 where s.fiscal_year=2021
 group by p.division,p.product_code,p.product)

select *
from temp
where rank_order<=3;
```

division	product_code	product	total_sold_quantity	rank_order
N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
N & S	A6818160202	AQ Pen Drive DRC	688003	2
N & S	A6819160203	AQ Pen Drive DRC	676245	3
P & A	A2319150302	AQ Gamers Ms	428498	1
P & A	A2520150501	AQ Maxima Ms	419865	2
P & A	A2520150504	AQ Maxima Ms	419471	3
PC	A4218110202	AQ Digit	17434	1
PC	A4319110306	AQ Velocity	17280	2
PC	A4218110208	AQ Digit	17275	3