Consumer Goods

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

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

Output :-

	market
1	Australia
2	Bangladesh
3	India
4	Indonesia
5	Japan
6	Newzealand
7	Philiphines
8	South Korea

2. What is the percentage of unique product increase in 2021 vs. 2020?

```
 select
count(distinct case when fiscal_year = 2020 then product_code end) as
unique_product_2020,
count(distinct case when fiscal_year = 2021 then product_code end) as
unique_product_2021,
ROUND((CAST(count(distinct case when fiscal_year = 2021 then product_code end)
-count(distinct case when fiscal_year = 2020 then product_code end) AS float)
/count(distinct case when fiscal_year = 2020 then product_code end))*100,1) AS
percentage_change
from fact_sales_monthly
where fiscal_year IN (2020,2021);
```

Output :-

	unique_product_2020	unique_product_2021	percentage_change
1	245	333	35.9

3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

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

Output :-

	segment	product_count
1	Notebook	129
2	Accessories	116
3	Peripherals	84
4	Desktop	32
5	Storage	27
6	Networking	9

4. Follow-up: Which segment had the most increase in unique products in2021 vs 2020?

```
 select Top 1 segment,
COUNT(distinct case when fiscal_year = 2020 then dp.product_code end) as
unique_product_2020,
COUNT(distinct case when fiscal_year = 2021 then dp.product_code end) as
unique_product_2021,
(COUNT(distinct case when fiscal_year = 2021 then dp.product_code end) -
COUNT(distinct case when fiscal_year = 2020 then dp.product_code end)) as
difference
from dim_product dp join
fact_sales_monthly fsm on
dp.product_code = fsm.product_code
group by segment order by difference
desc;
```

Output :-

	segment	unique_product_2020	unique_product_2021	difference
1	Accessories	69	102	33
2	Notebook	92	108	16
3	Peripherals	59	75	16

5. Get the products that have the highest and lowest manufacturing costs.

```
select distinct dp.product_code,product, manufacturing_cost from dim_product dp
join fact_manufacturing_cost fmc on dp.product_code = fmc.product_code
where manufacturing_cost = (select MAX(manufacturing_cost) from
fact_manufacturing_cost) OR
manufacturing_cost = (select MIN(manufacturing_cost) from fact_manufacturing_cost)
order by manufacturing_cost desc;
```

Output :-

	product_code	product	manufacturing_cost
1	A6120110206	AQ HOME Allin1 Gen 2	240.5364
2	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 theIndian market

```
select Top 5 dc.customer_code,customer,Round(AVG(pre_invoice_discount_pct),3) as
average_discount_percentage from dim_customer dc
join fact_pre_invoice_deductions fpd on dc.customer_code = fpd.customer_code
where fiscal_year = 2021 and market = 'India' group by dc.customer_code,customer
order by average_discount_percentage desc;
```

Output :-

	customer_code	customer	average_discount_percentage
1	90002009	Flipkart	0.308000
2	90002006	Viveks	0.304000
3	90002003	Ezone	0.303000
4	90002002	Croma	0.303000
5	90002016	Amazon	0.293000

7. Get the complete report of the Gross sales amount for the customer **"AtliqExclusive"** for each month**.** This analysis helps to get an idea of low and high-performing months and take strategic decisions.

```
select DATENAME(MONTH,date) as Month ,sale.fiscal_year,Round(Sum(gross_price *
sold_quantity),1) as Gross_sale_amount from fact_sales_monthly sale join
dim_customer dc on sale.customer_code = dc.customer_code
join fact_gross_price gross  on  sale.product_code = gross.product_code where
customer = 'Atliq Exclusive' group by DATENAME(MONTH,date),sale.fiscal_year
order by Gross_sale_amount desc;
```

Output :-

	Month	fiscal_year	Gross_sale_amount
1	November	2021	32666495.7194
2	October	2021	21315762.6502
3	December	2021	20651129.6147
4	January	2021	19798882.4486
5	September	2021	19741016.8767
6	May	2021	19271593.8367
7	March	2021	19222832.4108
8	July	2021	19130290.1610
9	February	2021	16019139.6884
10	June	2021	15490732.8125
11	November	2020	15222674.2275
12	April	2021	11511488.7304
13	August	2021	11386227.4797
14	October	2020	10445339.5244
15	December	2020	9766629.1455
16	January	2020	9569442.9999
17	September	2020	9136699.1483
18	February	2020	8079525.2262
19	August	2020	5736903.7179
20	July	2020	5188496.7564
21	June	2020	3442979.1280
22	May	2020	1585867.9227
23	April	2020	797109.2981
24	March	2020	765027.2230

8. In which quarter of 2020, got the maximum total_sold_quantity?

```
 with cte_quarter as
(select
case
when DATEPART(QQ,date) = '3' then 'Q1'
when DATEPART(QQ,date) = '4' then 'Q2'
when DATEPART(QQ,date) = '1' then 'Q3'
when DATEPART(QQ,date) = '2' then 'Q4'
end
as quarter,SUM(sold_quantity) as total_sold_quantity
from fact_sales_monthly where fiscal_year = 2020 group by DATEPART(QQ,date)
)
select * from cte_quarter;
```

Output :-

	quarter	total_sold_quantity
1	Q1	5290893
2	Q3	3663507
3	Q2	8424071
4	Q4	3378951

9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

```
With CTE as
 (select distinct channel, Round(SUM(gross_price * sold_quantity),1) as
gross_sales_mln from fact_sales_monthly sale
 join fact_gross_price gross on sale.product_code = gross.product_code
 join dim_customer dc on sale.customer_code = dc.customer_code where
sale.fiscal_year = 2021
 group by channel)
 select channel,gross_sales_mln, (gross_sales_mln/(select sum(gross_sales_mln)
from CTE))*100 as percentage
 from CTE order by percentage desc;
```

Output :-

	channel	gross_sales_mln	percentage
1	Retailer	1938860846.5000	73.221100
2	Direct	409915528.4000	15.480400
3	Distributor	299174563.7000	11.298300

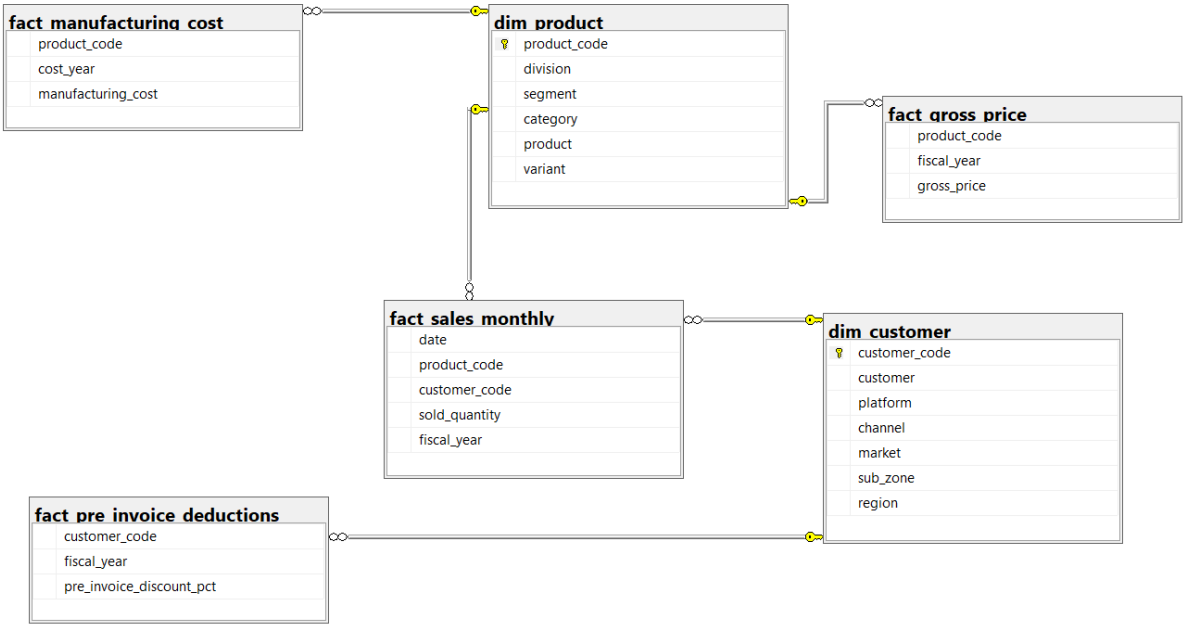
10. Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

```
With sale as
 (select dp.division,dp.product_code,dp.product,sum(sold_quantity)
total_sold_quantity,
 RANK() over(PARTITION BY division Order by sum(sold_quantity) desc) AS Rank from
dim_product  dp
 join fact_sales_monthly sale on dp.product_code = sale.product_code where
fiscal_year = 2021
 group by dp.division,dp.product_code,dp.product)

 select * from sale where rank <= 3;
```

Output:-

	division	product_code	product	total_sold_quantity	Rank
1	N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
2	N & S	A6818160202	AQ Pen Drive DRC	688003	2
3	N & S	A6819160203	AQ Pen Drive DRC	676245	3
4	P & A	A2319150301	AQ Gamers Ms	808436	1
5	P & A	A2118150104	AQ Master wired x1 Ms	701086	2
6	P & A	A2218150201	AQ Master wireless x1 Ms	473693	3
7	PC	A4218110202	AQ Digit	17434	1
8	PC	A4319110306	AQ Velocity	17280	2
9	PC	A4218110208	AQ Digit	17275	3


fact_manufacturing_cost
product_code
cost_year
manufacturing_cost
dim_product
product_code
division
segment
category
product
variant
fact_gross_price
product_code
fiscal_year
gross_price
fact_sales_monthly
date
product_code
customer_code
sold_quantity
fiscal_year
dim_customer
customer_code
customer
platform
channel
market
sub_zone
region
fact_pre_invoice_deductions
customer_code
fiscal_year
pre_invoice_discount_pct