Consumer Goods Analytics

Request 1:

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

SQL Query

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

Output

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Request 2:

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

SQL Query

```
with  f_2020 as (
select fiscal_year ,count(distinct product_code) as unique_products_2020
from fact_sales_monthly
where fiscal_year=2020
group by fiscal_year),
 f_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 f_2020
cross join f_2021
```

Output

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

Request 3:

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

SQL Query

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

Output

product_code	segment	product_count
A4118110101	Notebook	129
A2118150101	Accessories	116
A0118150101	Peripherals	84
A5820110101	Desktop	32
A6218160101	Storage	27
A7118160101	Networking	9

Request 4:

- Which segment had the most increase in unique products in 2021 vs 2020?

SQL Query

```
with f_2020 as(
select p.segment,count(distinct s.product_code) as product_count_2020
from fact_sales_monthly s
join dim_product p
on s.product_code=p.product_code
group by p.segment,s.fiscal_year
having fiscal_year=2020),
 f_2021 as (
select  p.segment,count(distinct s.product_code) as product_count_2021
from fact_sales_monthly s
join dim_product p
on s.product_code=p.product_code
group by p.segment,s.fiscal_year
having fiscal_year=2021)
select f_2020.Segment,Product_count_2020, Product_count_2021,
(product_count_2021- product_count_2020) as Difference
from f_2020,f_2021
where f_2020.segment=f_2021.segment
order by difference desc
```

Output

Segment	Product_count_2020	Product_count_2021	Difference
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

Request 5:

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

SQL Query

```
select m.Product_code,Product,Manufacturing_cost
from fact_manufacturing_cost m
join dim_product p
on p.product_code=m.product_code
where  m.manufacturing_cost = (select min(manufacturing_cost)
from fact_manufacturing_cost ) or
m.manufacturing_cost = (select max(manufacturing_cost)
from fact_manufacturing_cost)
order by manufacturing_cost desc
```

Output

Product_code	Product	Manufacturing_cost
A6121110208	AQ HOME Allin1 Gen 2	263.4207
A2118150101	AQ Master wired x1 Ms	0.8654

Request 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.

SQL Query

```
select c.customer_code,c.customer,
round(avg(pre_invoice_discount_pct*100),2) as average_discount_percentage
from fact_pre_invoice_deductions p
join dim_customer c
on c.customer_code=p.customer_code
where market ='India' and fiscal_year=2021
group by customer,customer_code
order by average_discount_percentage desc
limit 5
```

Output

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

Request 7:

- Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month .

SQL Query

```
with gross_sales_table as(
select date,s.customer_code,g.fiscal_year,
gross_price*sold_quantity as gross_sales
from fact_sales_monthly s
join fact_gross_price g
on s.product_code=g.product_code),
customer as(
select date,c.customer_code,gross_sales from gross_sales_table g
join dim_customer c
on c.customer_code=g.customer_code
where customer='Atliq Exclusive')
select monthname(date) as Month,year(date) as Year,
round(sum(gross_sales)/1000000,2) as Gs_sls_amnt_mln
from customer
group by month,year;
```

Output

month	fiscal_year	gross_sales_amt
September	2020	9092670.34
October	2020	10378637.60
November	2020	15231894.97
December	2020	9755795.06
January	2020	9584951.94
February	2020	8083995.55
March	2020	766976.45
April	2020	800071.95
May	2020	1586964.48
June	2020	3429736.57
July	2020	5151815.40
August	2020	5638281.83
September	2021	19530271.30
October	2021	21016218.21
November	2021	32247289.79
December	2021	20409063.18
January	2021	19570701.71
February	2021	15986603.89
March	2021	19149624.92
April	2021	11483530.30
May	2021	19204309.41
June	2021	15457579.66
July	2021	19044968.82
August	2021	11324548.34

Request 8:

- In which quarter of 2020, got the maximum total_sold_quantity?

SQL Query

```
with cte1 as(
select sold_quantity ,
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
from fact_sales_monthly
where fiscal_year=2020)

select Quarter,round(sum(sold_quantity)/1000000,2) as Total_sold_quantity_mln
from cte1
group by Quarter
order by Total_sold_quantity_mln desc
```

Output

Quarter	Total_sold_quantity_mln
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

Request 9:

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

SQL Query

```
with cte1 as(select c.channel,sum(g.gross_price*m.sold_quantity) as total_sales
from fact_sales_monthly m
join dim_customer c
on m.customer_code=c.customer_code
join fact_gross_price g
on g.product_code=m.product_code and g.fiscal_year=m.fiscal_year
where m.fiscal_year=2021
group by c.channel
)
select Channel,round(total_sales/1000000,2) as Gross_sales_mln,
round((total_sales)/sum(total_sales)over()*100,2) as Percentage
from cte1
group by channel
order by percentage desc
```

Output

Channel	Gross_sales_mln	Percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30

Request 10:

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

SQL Query

```
with cte1 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 dim_product p
join fact_sales_monthly s
on p.product_code=s.product_code
where fiscal_year=2021
group by p.division,p.product_code,p.product)
select *
from cte1
where rank_order <=3
```

Output

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

Thank You