
CODE
BASICS
Ad Hoc Insights
Domain :Consumer Goods

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"
```

OUTPUT

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

INSIGHT

- Out of 10 market APAC regions “Atliq Exclusive”having market in 8 regions


NORTH AMERICA
EUROPE
ASIA
Atlantic Ocean
Japan
Bangladesh
South Korea
Philiphines
India
AFRICA
Indonesia
SOUTH AMERICA
Indian Ocean
Australia
AUSTRALIA
Newzea

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_change

```
WITH CTE2 AS (
SELECT
 COUNT(DISTINCT product_code) as unique_products_2020,
      (SELECT COUNT(DISTINCT product_code)
       FROM fact_sales_monthly WHERE fiscal_year =2021)
       as unique_products_2021
      FROM fact_sales_monthly
      WHERE fiscal_year =2020)
SELECT  *,
  ROUND(((unique_products_2021-
unique_products_2020)*100/unique_products_2020),2) as
percentage_change FROM CTE2;
```

OUTPUT

unique_products_2020	unique_products_2021	percentage_change
245	334	36.33

INSIGHT

- Interestingly, there were No change in the market size between 2020-21.but,the unique product count were increased to 36.33% ,which shows that the demand and supply for products in the same region got increased significantly.

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 they are segment,product_count

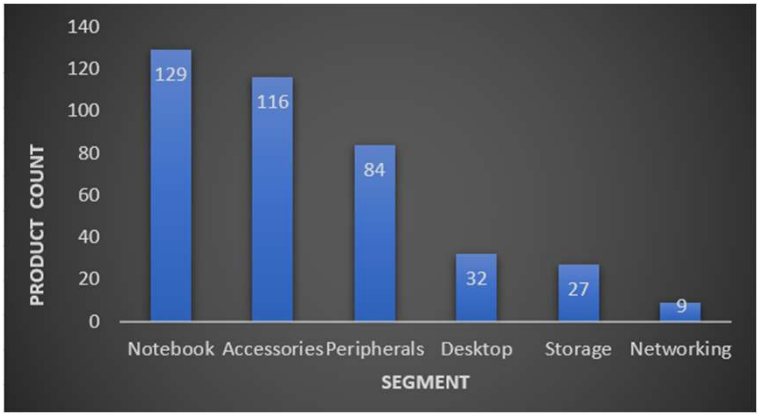
```
SELECT
    segment,COUNT(segment)  as product_count
    FROM dim_product
    GROUP BY segment
    ORDER BY product_count DESC;
```

OUTPUT

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

INSIGHT

- We can clearly observe that 80 % of products are from Notebook, Accessories and Peripherals segment



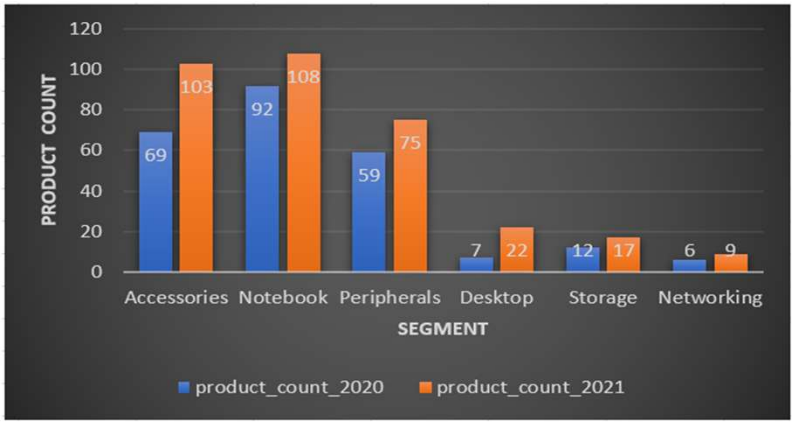
4. Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment,product_count_2020,product_count_2021,difference

```
WITH CTE4 as (
    SELECT
    dp.segment as SEGMENT,COUNT(DISTINCT fsm.product_code) as
product_count_2020,fsm.fiscal_year
    FROM fact_sales_monthly as fsm
    JOIN dim_product as dp
    ON fsm.product_code =dp.product_code
    WHERE fiscal_year =2020
    GROUP BY dp.segment
    ORDER BY product_count_2020 DESC) ,

    CTE41 as (
    SELECT
     dp.segment AS SEGMENT1,COUNT(DISTINCT fsm.product_code) as
product_count_2021,fsm.fiscal_year
    FROM fact_sales_monthly as fsm
    JOIN dim_product as dp
    ON fsm.product_code =dp.product_code
    WHERE fiscal_year =2021
    GROUP BY dp.segment
    ORDER BY product_count_2021 DESC )

    SELECT
        SEGMENT,CTE4.product_count_2020,CTE41.product_count_2021,
        (CTE41.product_count_2021-CTE4.product_count_2020) AS Difference
        FROM CTE4
        JOIN CTE41
       ON CTE4.SEGMENT =CTE41.SEGMENT1
       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

Low production growth comparatively, with other 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
    dp.product_code, product,
    fmc.manufacturing_cost,fmc.cost_year

    FROM dim_product as dp
    JOIN fact_manufacturing_cost as fmc
    USING(product_code)

    WHERE manufacturing_cost in
    ((select min(manufacturing_cost) from
   fact_manufacturing_cost)

    UNION
    (select max(manufacturing_cost) from
    fact_manufacturing_cost));
```

OUTPUT

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

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

  dc.customer_code,customer,
  ROUND(avg(pre_invoice_discount_pct),4) as
  avg_discount_percentage

  From dim_customer as dc
  JOIN fact_pre_invoice_deductions as fpid
  ON dc.customer_code =fpid.customer_code

  WHERE dc.market ="India" and
   fpid.fiscal_year =2021

   GROUP BY (dc.customer_code)
   ORDER BY avg_discount_percentage DESC

   LIMIT 5;
```

OUTPUT

customer_code	customer	avg_discount_percentage
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

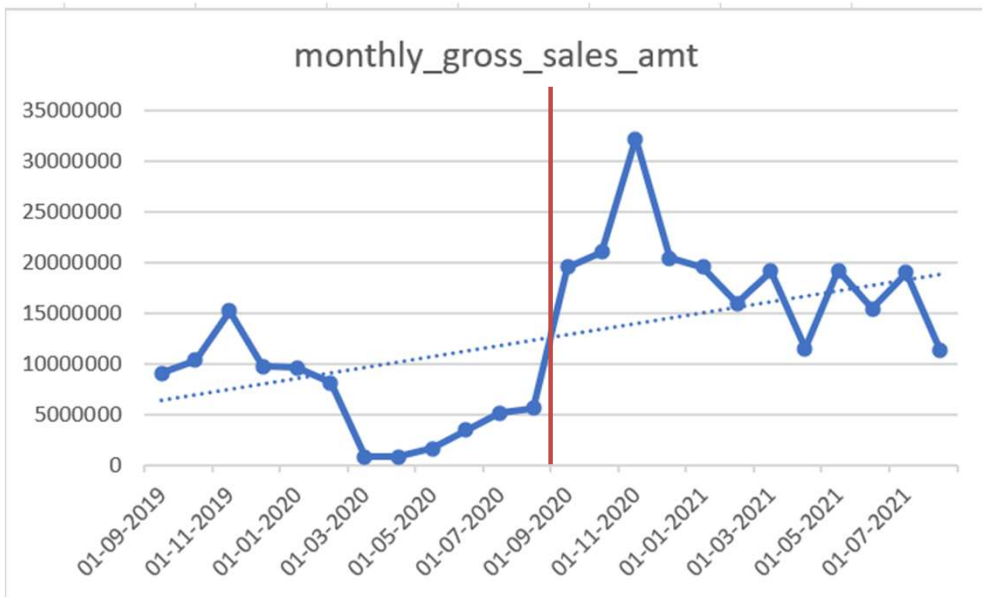
INSIGHT

- Although, Flipkart customer having highest avg discount % among Top 5 customers. But, there were very minor % change b/w the customers, which doesn't make much difference b/w customers.

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
    fsm.date,MONTHNAME(fsm.date) as
month,YEAR(fsm.date) as
    year,fsm.fiscal_year,dc.customer,
   (SUM(fsm.sold_quantity*fgp.gross_price)) as
    monthly_gross_sales_amt

   FROM fact_sales_monthly as fsm
     JOIN dim_customer as dc
     ON fsm.customer_code =dc.customer_code
     JOIN fact_gross_price as fgp
     ON fsm.product_code =fgp.product_code

     WHERE dc.customer ="Atliq Exclusive"

     GROUP BY month,year;
```



OUTPUT

date	month	fiscal_year	monthly_gross_sales_amt	Rank
01-09-2019	September	2020	9092670.339	17
01-10-2019	October	2020	10378637.6	14
01-11-2019	November	2020	15231894.97	11
01-12-2019	December	2020	9755795.058	15
01-01-2020	January	2020	9584951.939	16
01-02-2020	February	2020	8083995.548	18
01-03-2020	March	2020	766976.4531	24
01-04-2020	April	2020	800071.9543	23
01-05-2020	May	2020	1586964.477	22
01-06-2020	June	2020	3429736.571	21
01-07-2020	July	2020	5151815.402	20
01-08-2020	August	2020	5638281.829	19
01-09-2020	September	2021	19530271.3	5
01-10-2020	October	2021	21016218.21	2
01-11-2020	November	2021	32247289.79	1
01-12-2020	December	2021	20409063.18	3
01-01-2021	January	2021	19570701.71	4
01-02-2021	February	2021	15986603.89	9
01-03-2021	March	2021	19149624.92	7
01-04-2021	April	2021	11483530.3	12
01-05-2021	May	2021	19204309.41	6
01-06-2021	June	2021	15457579.66	10
01-07-2021	July	2021	19044968.82	8
01-08-2021	August	2021	11324548.34	13

INSIGHTS

- The sales of “Atliq Exclusive” from march 2k20 – August 2k20 were falling drastically.
  which we can assume it because of covid 19.
- By, November FY 2k21 the sales got raised highly, which is more than 40 X times to the lowest month(March) from FY 2k20.
- FY 2k21 had the better sales comparatively with 2k20 sales.

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 in (9,10,11) THEN 'Q1'
       WHEN month in (12,1,2) THEN 'Q2'
       WHEN month in (3,4,5) THEN 'Q3'
       WHEN month in (6,7,8) THEN 'Q4'
       ELSE 'Q'
    END AS Quarter_month,
    SUM(sold_quantity) AS Quarter_wise_sold_qty

  FROM (SELECT date, MONTH(date) as
  month,sold_quantity,fiscal_year

  FROM fact_Sales_monthly) AS quater_table

  WHERE fiscal_year=2020

  GROUP BY Quarter_month
  ORDER BY  Quarter_wise_sold_qty DESC;
```

OUTPUT

Quarter_month	Quarter_wise_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

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 CTE9 as(
   SELECT
   dc.channel,
   CONCAT(ROUND(SUM(fgp.gross_price*fsm.sold_quantity)/1000000,2)," M")
   as Gross_Sales_mlns

   FROM fact_sales_monthly as fsm
    JOIN dim_customer as dc ON fsm.customer_code =dc.customer_code
    JOIN fact_gross_price as fgp ON fsm.product_code =fgp.product_code

    WHERE fsm.fiscal_year =2021
    GROUP BY channel)
     SELECT *,
     CONCAT(ROUND(gross_sales_mlns*100/SUM(gross_sales_mlns)  over(),2)," %")
      as  Gross_Sales_pct

     FROM CTE9

     ORDER BY Gross_Sales_pct DESC;
```

OUTPUT

channel	Gross_Sales_mlns	Gross_Sales_pct
Retailer	1924.17 M	73.22 %
Direct	406.69 M	15.48 %
Distributor	297.18 M	11.31 %

INSIGHT

- Retailer channel had the clear dominance comparatively with Direct and Distributor channel.

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 CTE10 as(SELECT
    fsm.product_code,division,SUM(sold_quantity)
     as Total_Sold_Qty
     FROM dim_product as dp
     JOIN fact_sales_monthly as fsm
     ON dp.product_code =fsm.product_code
     WHERE fsm.fiscal_year =2021
     GROUP BY product_code
     ORDER BY division,Total_Sold_Qty DESC
     ),

  CTE10_1 AS (
       SELECT
      CTE10.product_code,
      dense_rank() over(partition by division ORDER
BY
      Total_Sold_Qty DESC) as ranking
       FROM CTE10 )

   SELECT
   CTE10.product_code,CTE10.division,
   CTE10.Total_Sold_Qty,CTE10_1.ranking

   FROM CTE10
   JOIN CTE10_1

   ON CTE10.product_Code =CTE10_1.product_code
    WHERE ranking<=3
```

OUTPUT

product_code	division	Total_Sold_Qty	ranking
A6720160103	N & S	701373	1
A6818160202	N & S	688003	2
A6819160203	N & S	676245	3
A2319150302	P & A	428498	1
A2520150501	P & A	419865	2
A2520150504	P & A	419471	3
A4218110202	PC	17434	1
A4319110306	PC	17280	2
A4218110208	PC	17275	3


thank
you