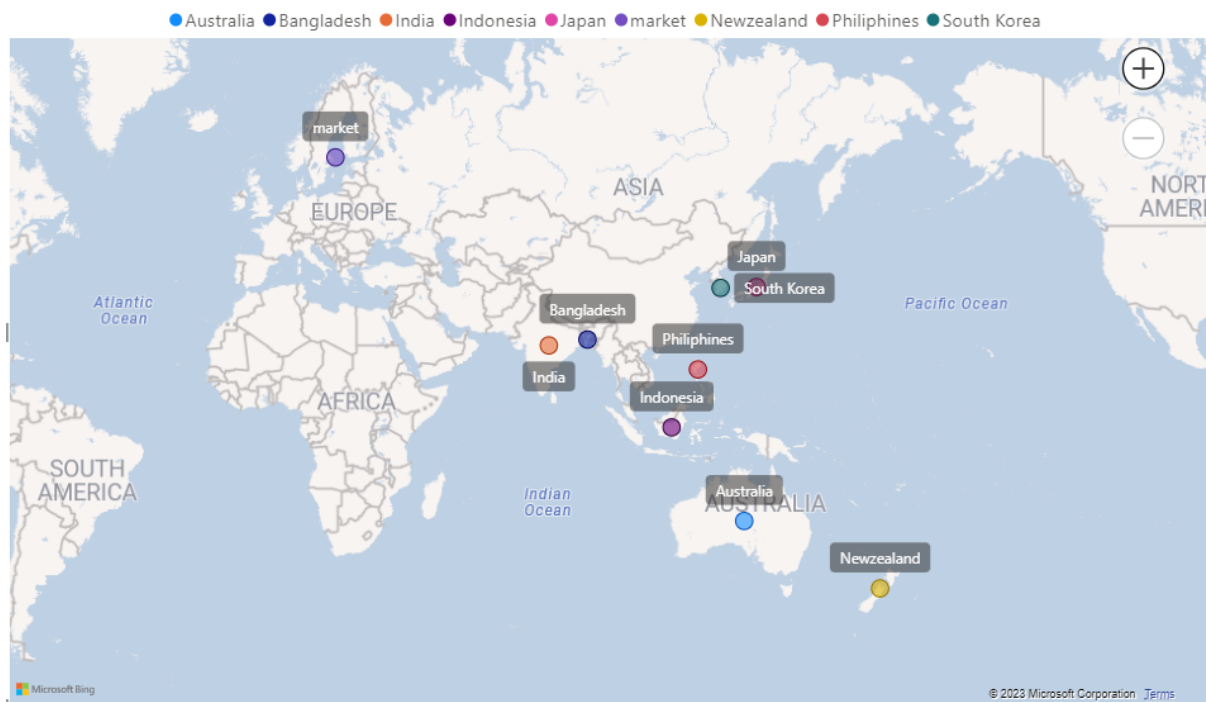1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

SELECT market FROM gdb023.dim_customer where customer like "%Atliq Exclusive%" and region = "APAC";

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh
India

Atliq Exclusive in APAC Region

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 cte1 AS
        (
   select
                count(distinct product_code) AS product_count_2020
        FROM gdb023.fact_sales_monthly
        where fiscal_year=2020
   ),
cte2 AS (
        select
                count(distinct product_code) AS product_count_2021
        FROM gdb023.fact_sales_monthly
        where fiscal_year=2021
   )
select
                product_count_2020,
                product_count_2021,
     abs(product_count_2020-product_count_2021)/product_count_2020*100 AS
increase_product_count_in_2021
from cte1,cte2;
```

product_count_2020	product_count_2021	increase_product_count_in_2021
245	334	36.3265

Unique_product_2020 Vs 2021

● unique_product_2020 ● unique_product_2021

334

36.3265

245

unique_product_2021   334
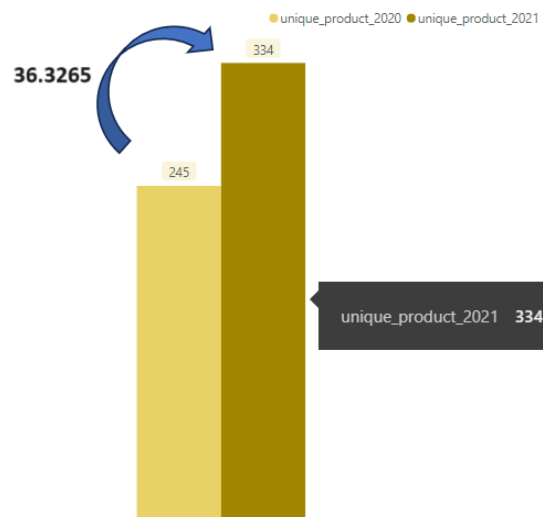
3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts. The final output contains 2 fields, segment product_count

SELECT segment, count(distinct product_code) AS product_count
FROM gdb023.dim_product
group by segment
order by product_count desc ;

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

Unique product_count by segment
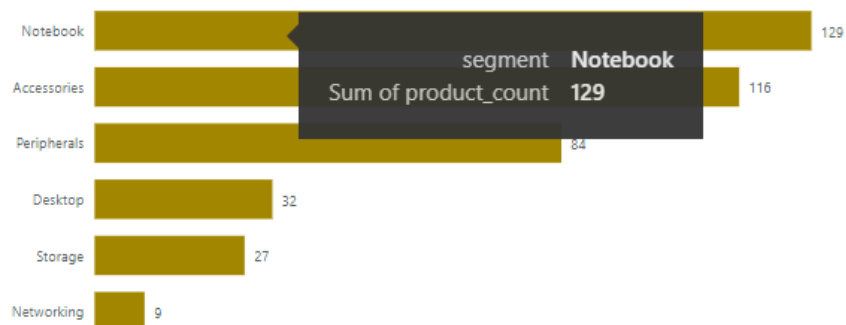
4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment product_count_2020 product_count_2021 difference

```
with cte1 as (
           SELECT
                      dp.segment,
                      count( distinct product_code) AS product_count_2020
           FROM gdb023.dim_product dp
           join fact_sales_monthly fs
           using(product_code)
           where fiscal_year = 2020
           group by segment
),
cte2 as (

           SELECT
                      dp.segment,
                      count( distinct product_code) AS product_count_2021
           FROM gdb023.dim_product dp
           join fact_sales_monthly fs
           using(product_code)
           where fiscal_year = 2021
           group by segment
)
SELECT
          cte1.segment,product_count_2020,product_count_2021,
          abs(product_count_2020-product_count_2021)AS difference
from cte1,cte2
where cte1.segment= cte2.segment;
```

segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5

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
        MC.product_code, DM.product, MC.manufacturing_cost
from dim_product DM
join fact_manufacturing_cost MC
using(product_code)
where MC.manufacturing_cost
in (
        select min(manufacturing_cost) from fact_manufacturing_cost
   union
   select max(manufacturing_cost) from fact_manufacturing_cost
        )
;
```

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 .

```
 with cte1 AS
(
SELECT
        customer_code ,
   round(avg(pre_invoice_discount_pct),3)  AS average_discount_percentage
   FROM gdb023.fact_pre_invoice_deductions where fiscal_year= 2021
   group by customer_code\
),

 cte2 AS
(
select
   customer_code,
   customer,market
   from dim_customer where market = "India"
)

select
        cte2.customer ,cte1.average_discount_percentage , cte2.customer_code
from cte1
join cte2
using(customer_code)
order by average_discount_percentage desc
limit 5;
```
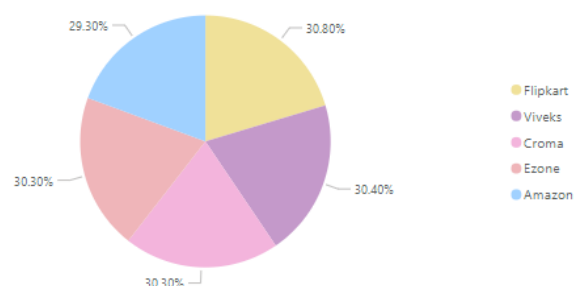
customer	average_discount_percentage	customer_code
Flipkart	0.308	90002009
Viveks	0.304	90002006
Croma	0.303	90002002
Ezone	0.303	90002003
Amazon	0.293	90002016

Discount_percentage by customer

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(FS.date) AS Year,
       monthname(FS.date) AS Month,
       round(sum(sold_quantity * gross_price),2) AS Gross_sales_Amount
FROM gdb023.fact_sales_monthly FS
join fact_gross_price GP
using(product_code)
where customer_code
      in (
  SELECT customer_code FROM gdb023.dim_customer where customer like "%Atliq Exclusive%"
)
group by FS.date
order by FS.date desc
 ;

Year	Month	Gross_sales_Amount
2021	August	11324548.34
2021	July	19044968.82
2021	June	15457579.66
2021	May	19204309.41
2021	April	11483530.30
2021	March	19149624.92
2021	February	15986603.89
2021	January	19570701.71
2020	December	20409063.18
2020	November	32247289.79
2020	October	21016218.21
2020	September	19530271.30
2020	August	5638281.83
2020	July	5151815.40
2020	June	3429736.57
2020	May	1586964.48
2020	April	800071.95
2020	March	766976.45

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
  quarter(date_add(date, INTERVAL 4 MONTH)) AS quarter,
  sum(sold_quantity) AS total_sold_quantity
FROM gdb023.fact_sales_monthly
where fiscal_year=2020
group by quarter
order by total_sold_quantity desc;

quarter	total_sold_quantity
1	7005619
2	6649642
4	5042541
3	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 cte1 as
        (
        SELECT
                        DC.channel,
                        sum(FC.sold_quantity*GP.gross_price) AS total_gross_sales
        FROM gdb023.fact_sales_monthly FC
        JOIN gdb023.fact_gross_price GP
        using(product_code)
        JOIN dim_customer DC
        using (customer_code)
        where GP.fiscal_year=2021
        group by DC.channel
        ),


cte2 as(
        select sum(cte1.total_gross_sales) AS gross_sales_Sum from cte1
        )
select
        cte1.channel,
        cte1.total_gross_sales AS gross_sales_mln ,
        round(cte1.total_gross_sales*100/cte2.gross_sales_Sum,2) AS contribution_percentage
from cte1,cte2;
```

channel	gross_sales_mln	contribution_percentage
Direct	356123812.9028	16.10
Retailer	1606393221.5361	72.61
Distributor	249859245.9931	11.29

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 product total_sold_quantity rank_order

```
with cte1 as
        ( select
                DM.division,
                DM.product_code,
                DM.product,
                 sum(FS.sold_quantity) AS total_sold_quantity
        FROM gdb023.dim_product DM
        join fact_sales_monthly FS using(product_code)
        where FS.fiscal_year = 2021
        group by DM.product_code,DM.product,DM.division
        ) ,

cte2 as (
        select
                * ,
                dense_rank() over (partition by division order by total_sold_quantity desc) as
rank_order
    from cte1
    )


select
        * from cte2  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