CONSUMER GOODS AD_HOC BUSINESS INSIGHTS

Insights Powered by SQL

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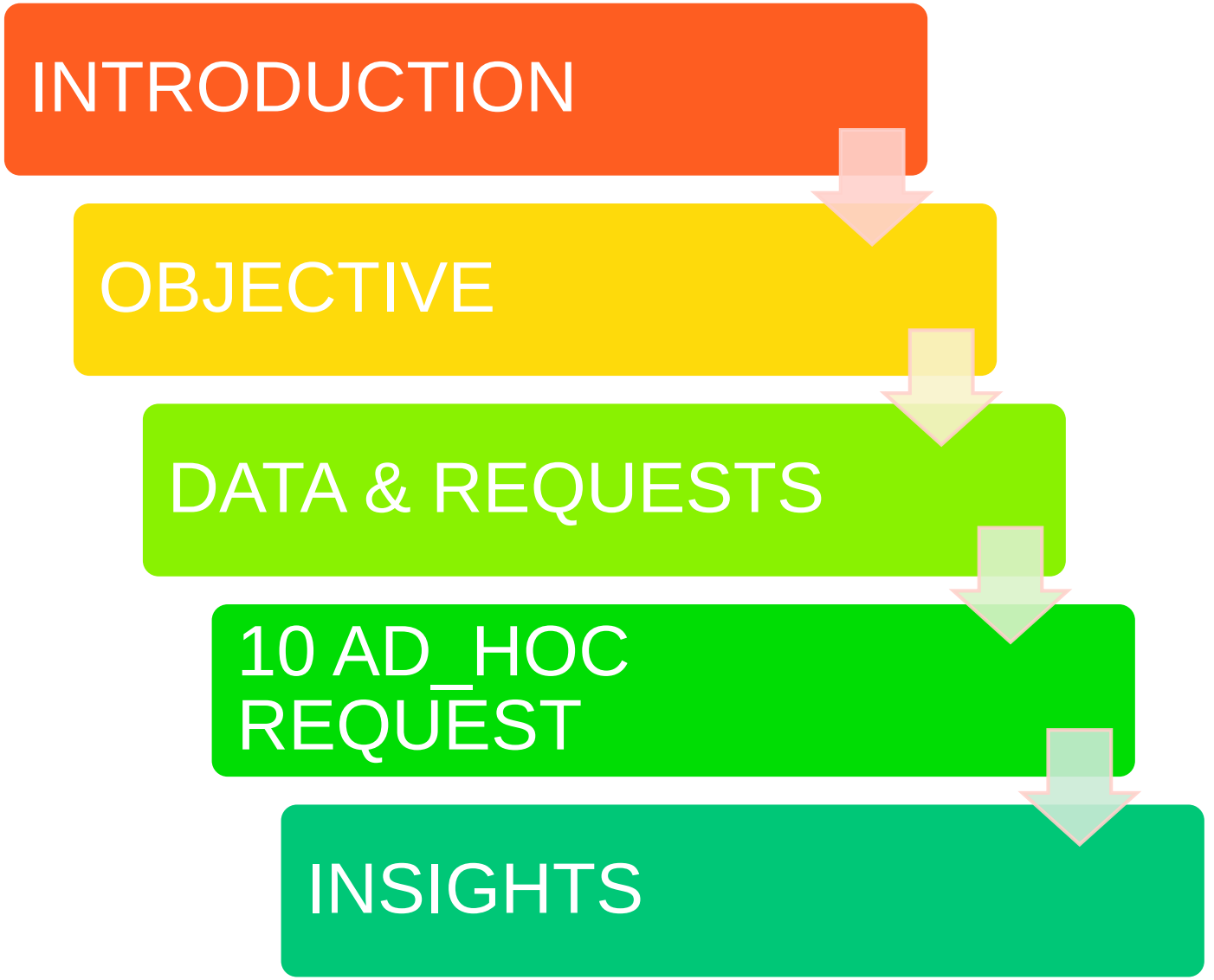
AGENDA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INTRODUCTION

About Company :

Atliq Hardware is a prominent computer hardware producer based in India, holding a leading position not only in the Indian Market but also in various other countries.

OBJECTIVE

1

Enhance Decision-Making : Improve the quality of decision making by providing the management with quick and data-informed insights

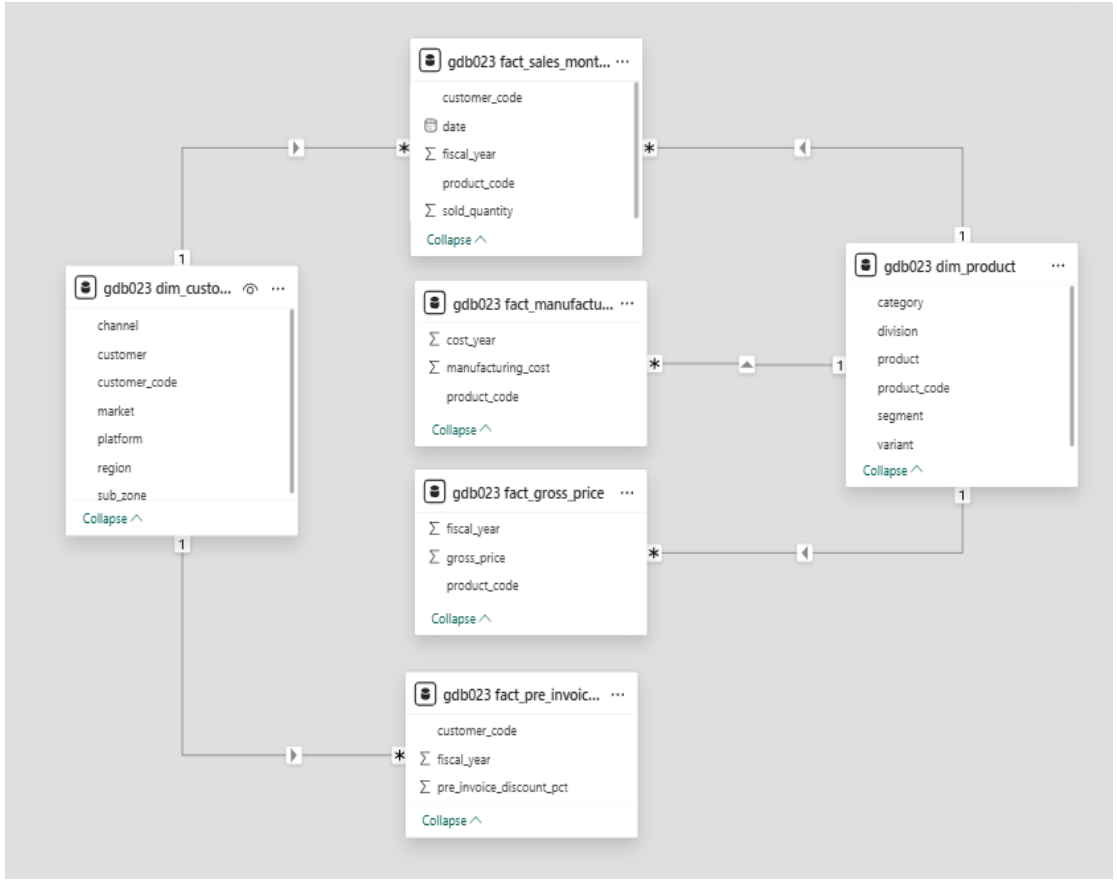
2

Expand Data Analytics Team : Strengthen the data analytics team by hiring multiple junior data analysts proficient in both technical and soft skills.

3

Evaluate Candidate Skills : Conduct a SQL challenge to asses candidates proficiency in technical abilities and communication, ensuring the selection of suitable candidates with a balanced skill set

DATA AND REQUESTS



Data Model

Codebasics SQL Challenge

Requests:

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

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

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

5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,
   product_code
   product
   manufacturing_cost

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

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

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

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

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

Ad_Hoc Requests

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

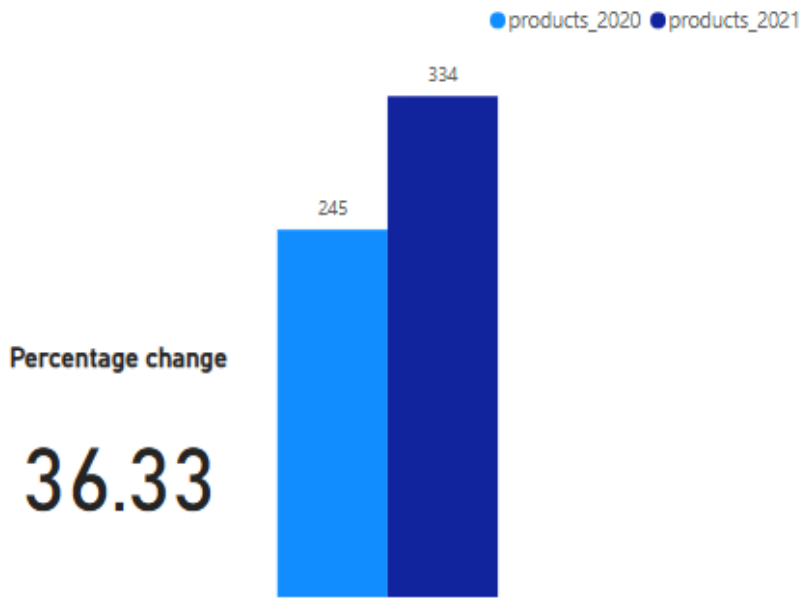
```sql
select distinct market
from dim_customer
where customer = "Atliq Exclusive"
and region = "APAC"
```

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Request 2:
What is the percentage of unique product Increase in 2021 vs 2020

```
with X as
        ( Select Count(distinct product_code) as unique_products_2020
          from fact_sales_monthly
          where fiscal_year= 2020),
    Y as
         ( Select Count(distinct product_code) as unique_products_2021
          from fact_sales_monthly
          where fiscal_year= 2021)
Select
      X.unique_products_2020,
      Y.unique_products_2021,
      round(((Y.unique_products_2021-X.unique_products_2020)/X.unique_products_2020)*100,2)
      as Percentage_change from X,Y
```

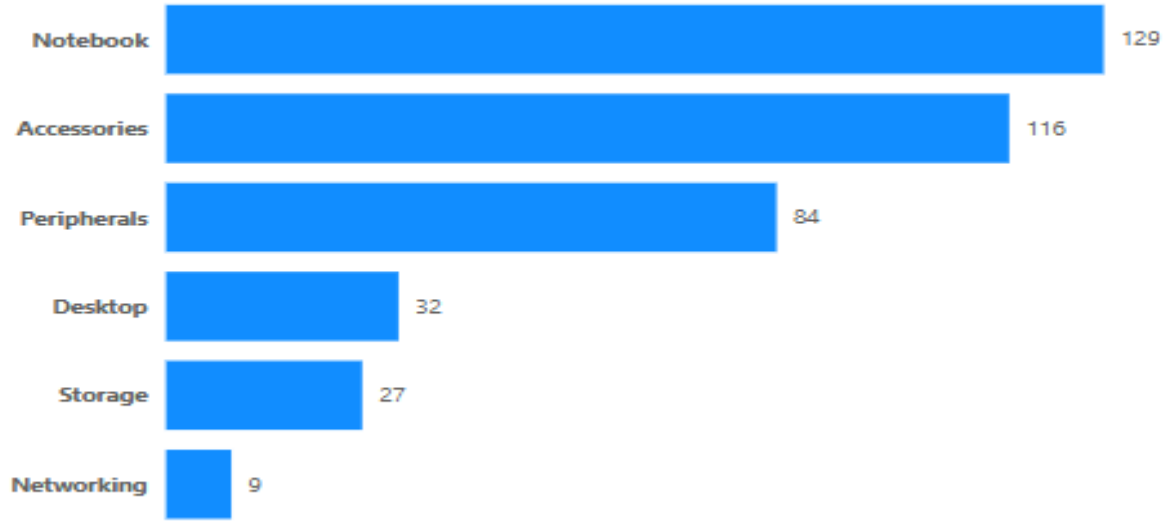
	unique_products_2020	unique_products_2021	Percentage_change
▶	245	334	36.33



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

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

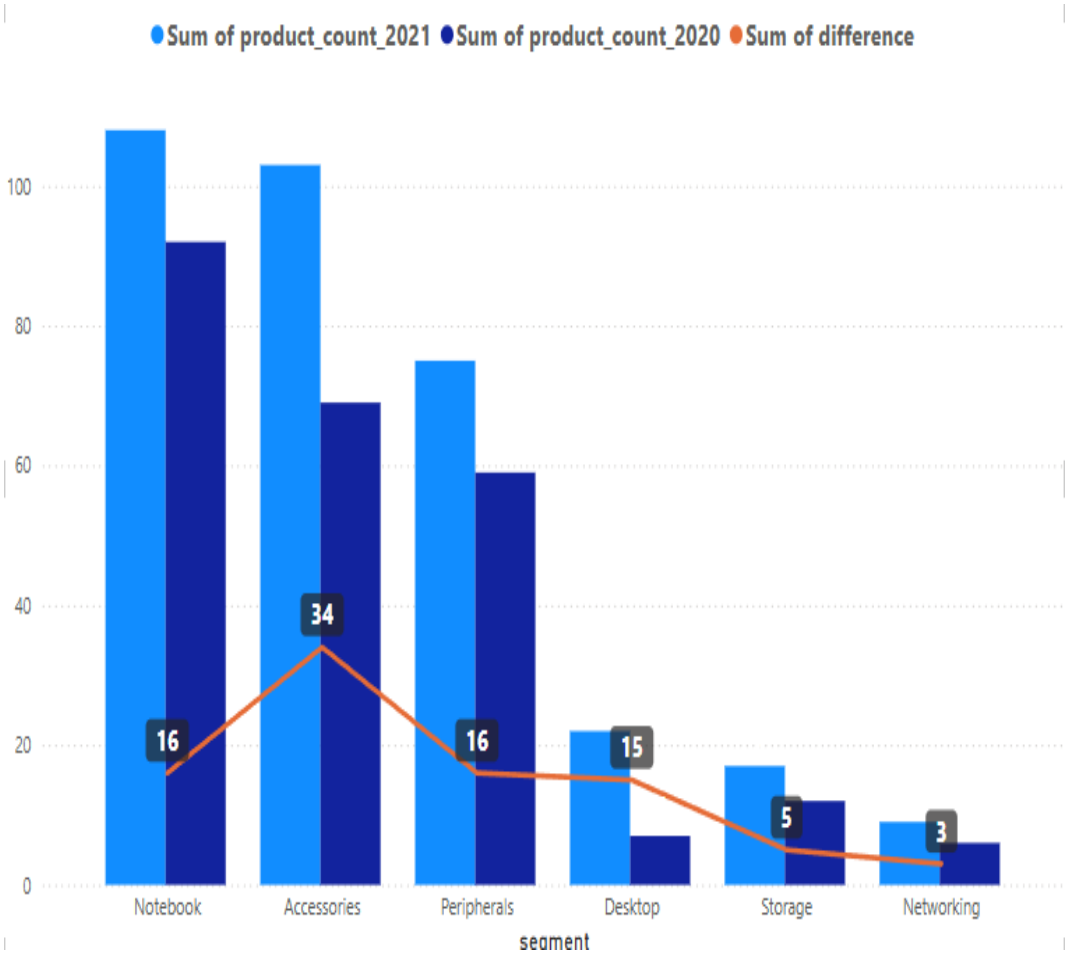
segment	product_count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9



Request 4:
Follow up: which segment had the most increase in unique products in 2021 vs 2020

```
With X as
        (Select p.segment ,
         count(distinct s.product_code) as product_count_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),
    Y as
       (Select p.segment ,
         count(distinct s.product_code) as product_count_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 x.segment , product_count_2020 ,
       product_count_2021 , abs(x.product_count_2020 - y.product_count_2021) as difference
from x join y on x.segment = y.segment order by difference desc
```

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

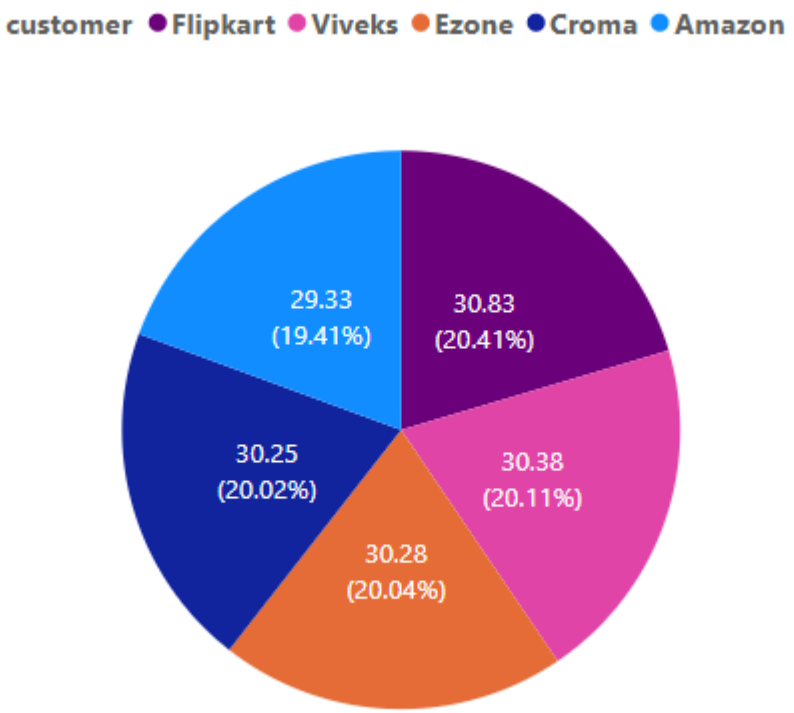
```sql
#Task5

Select m.product_code, p.product, m.manufacturing_cost
from fact_manufacturing_cost m join dim_product p
using(product_code)
where m.manufacturing_cost =
(select max(manufacturing_cost)
 from fact_manufacturing_cost )  or
 m.manufacturing_cost =
 (select min(manufacturing_cost)
 from fact_manufacturing_cost)
 order by m.manufacturing_cost desc
```

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

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

```
select i.customer_code , c.customer,
round(avg(i.pre_invoice_discount_pct)*100,2) as avg_dis_pct
from fact_pre_invoice_deductions i
join dim_customer c using(customer_code)
where fiscal_year = 2021 and c.market="India"
group by i.customer_code , c.customer
order by avg_dis_pct Desc
limit 5
```

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

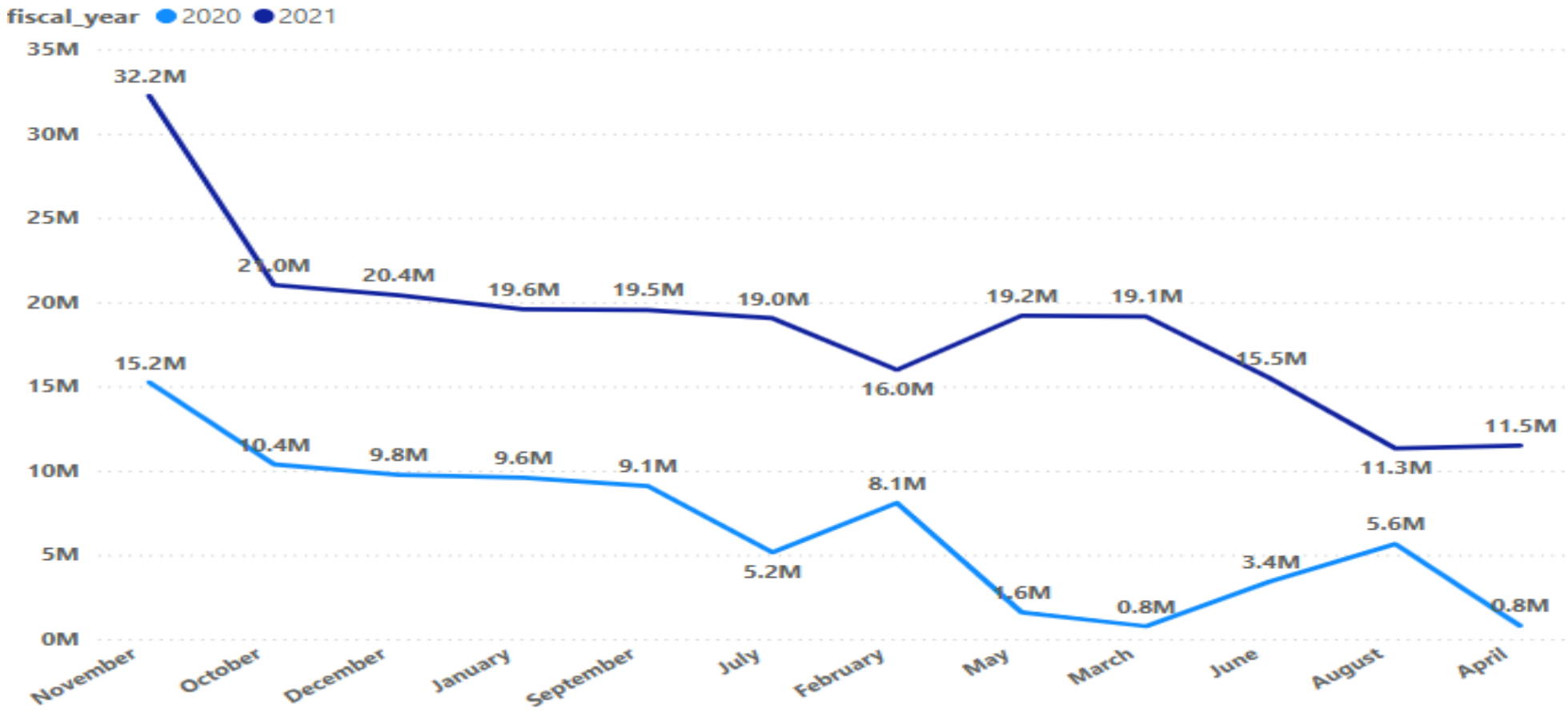


Request 7:
Get the complete report of the gross sales amount for the customer "Atliq Exclusive" for each month

```
Select monthname(s.date), s.fiscal_year ,
round(sum(g.gross_price*sold_quantity),2)
as gross_sales_amt from fact_sales_monthly s
join dim_customer c using(customer_code)
join fact_gross_price g using(product_code)
where customer = "Atliq Exclusive"
group by monthname(s.date), s.fiscal_year
order by fiscal_year;
```

monthname(s.date)	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 7 (Visual)

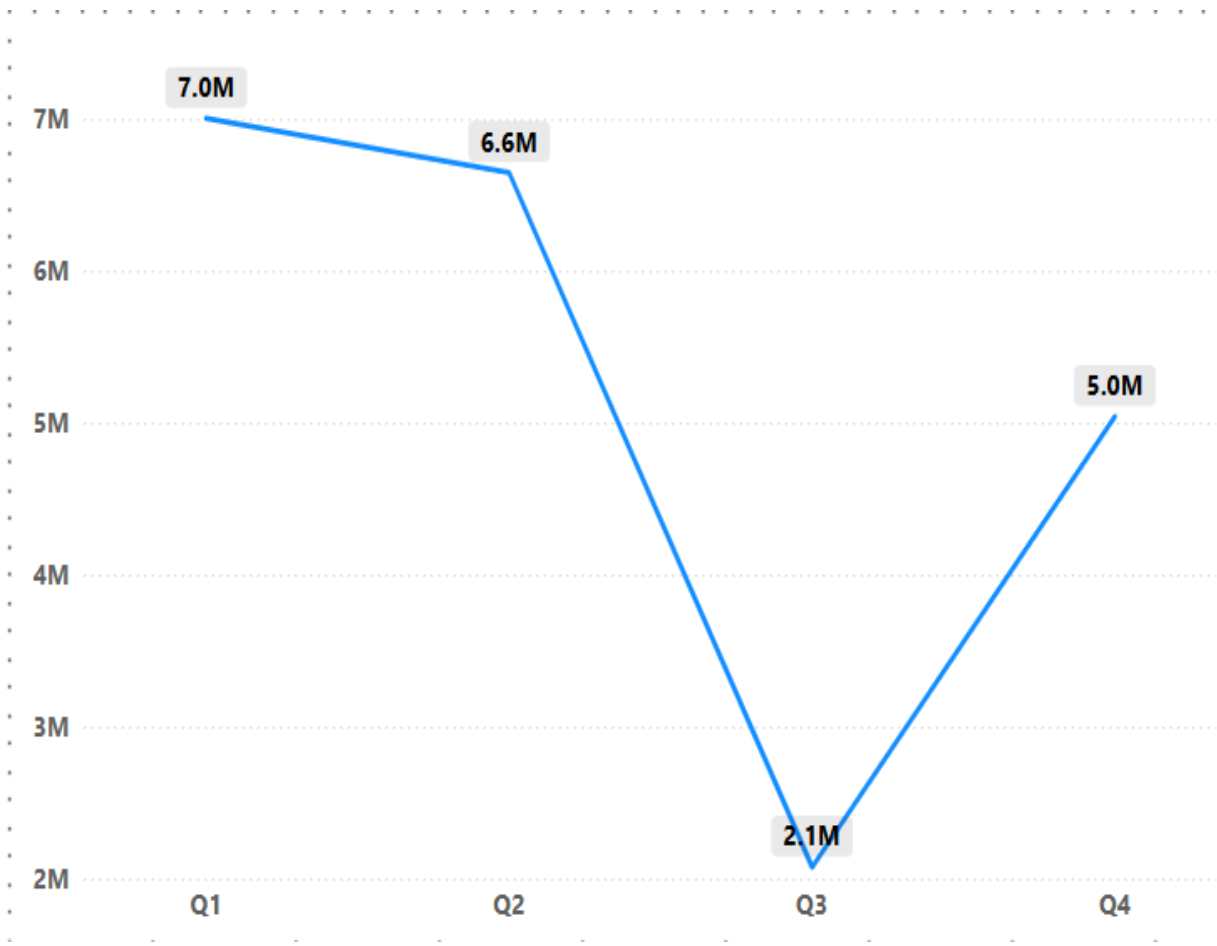


Request 8:
in which quarter of 2020 , got the maximum total_sold_quantity

```
select
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 Quarters,
Sum(sold_quantity) as total_sold_qty
from fact_sales_monthly
where fiscal_year=2020
group by Quarters
order by total_sold_qty DESC;
```

Result Grid | Filter Rows:

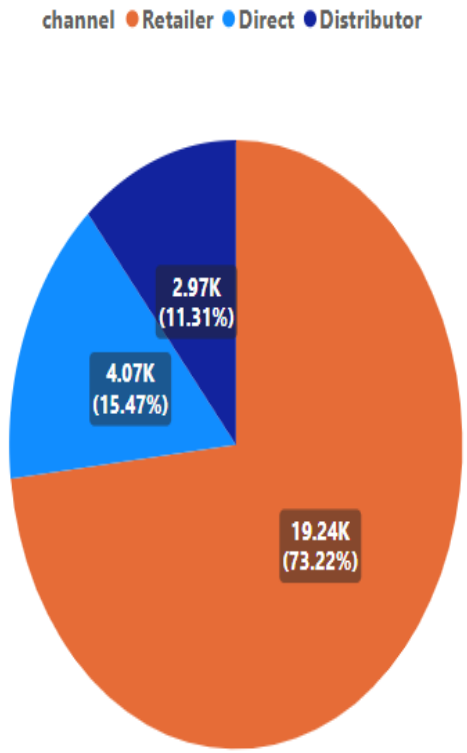
Quarters	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087



Request 9:
which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution

```
with X as
     ( select c.channel,
       round(sum(g.gross_price*s.sold_quantity)/100000,2) as gross_sales_mln
       from fact_sales_monthly s
       join dim_customer c using(customer_code)
       join fact_gross_price g using(product_code)
       where s.fiscal_year=2021
       group by c.channel)
select channel, gross_sales_mln,
round((gross_sales_mln/(select sum(gross_sales_mln)from x))*100,2)
as pct from X
order by gross_sales_mln Desc;
```

	channel	gross_sales_mln	pct
▶	Retailer	19241.70	73.22
	Direct	4066.87	15.47
	Distributor	2971.76	11.31



Request 10:
Get the top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021

```
With X as
(
Select P.division, S.product_code, P.product, Sum(S.sold_quantity) as Total_sold_quantity,
Rank() Over(Partition By P.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 S.fiscal_year = 2021
Group by P.division,S.product_code,P.product )

Select * from X
where Rank_Order In (1,2,3) order by division ,Rank_Order;
```

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

INSIGHTS

Our unique product experienced a remarkable **36.33%** increase in sales during the fiscal year 2021 compared to the previous year.

The **Top-Selling** product in our portfolio is the **Notebook**, while the **Networking product** lines shows the **lowest sales** figures.

Among our product manufacturing costs, **Desktops have the highest expenditure** , whereas **Mouse** production costs are the **lowest.**

During FY2021, **Flipkart** made the highest customer contribution with an impressive **30.83%**, whereas **Amazon's** customer contribution was the lowest, with a figure of **29.33%.**

During the **lowest sales** period , which was in **March 2020** we achieved sales of **2.8 million units**. However in **November 2021**, we experienced our **highest sales** contribution with a record of **32.2 million units** sold.

Thank You