



AtliQ
Hardware

Consumer Goods Ad hoc Insights

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Overview of Company

➤ Atliq Hardware is one of India's leading computer hardware manufacturers with a strong international presence. The company specializes in producing high-quality hardware components and has expanded its operations across multiple countries.

Problem statement

➤ Despite being a market leader, Atliq Hardware faces challenges in making data-driven decisions efficiently. The management lacks deep insights into key business metrics, leading to delays in strategic decision-making.

Objective

- To Leverage SQL for efficient data analysis, providing management with actionable Insights to derive informed decision making and optimize business performance.

About data

➤ Fact table:

Sales monthly

Manufacturing cost

Pre invoice deductions

Gross price

➤ Dimension table:

Customer details

Product details

➤ Fiscal year for Atliq starts from 1st September and ends on 31st August each year

➤ Sales data is available for fiscal year 2020-2021

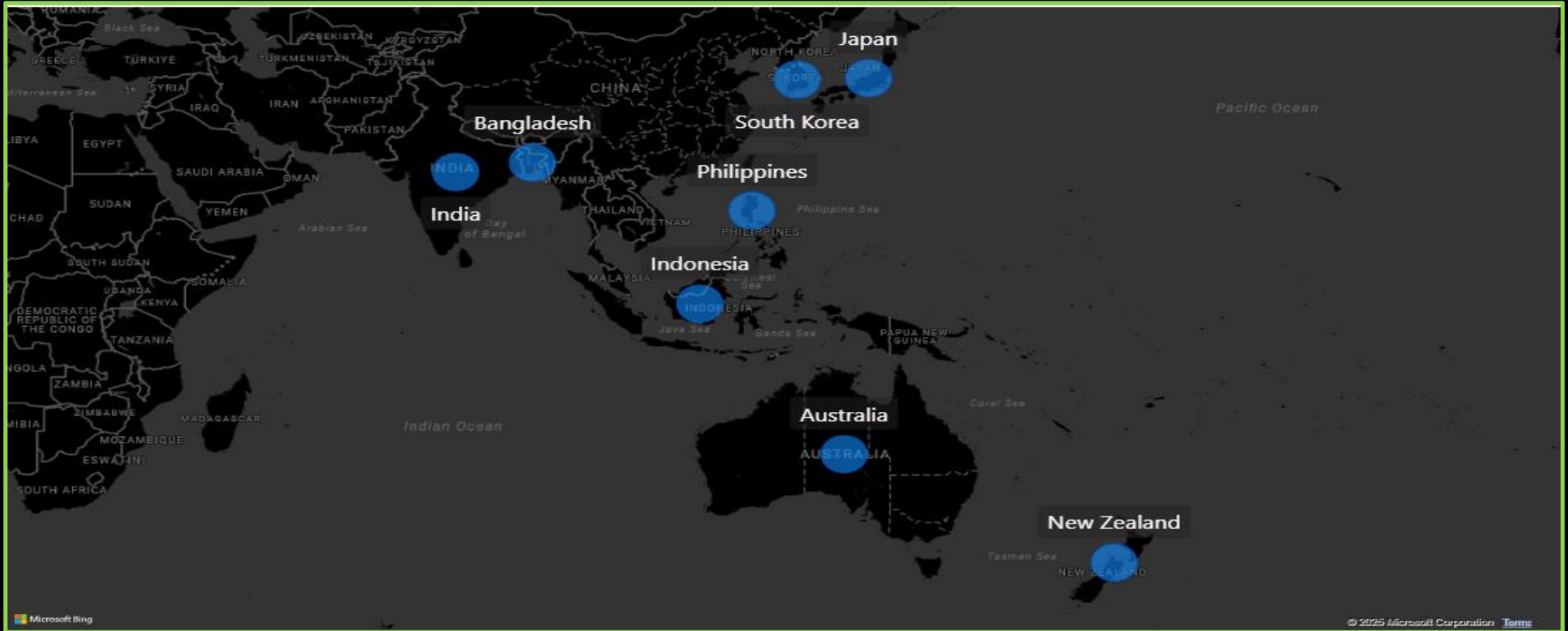
Request 1: Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

SQL Query

```
SELECT DISTINCT market
FROM dim_customer
WHERE customer = "Atliq Exclusive"
AND region = "APAC";
```

Output

market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh



Insights

- Atliq Exclusive operates in all major markets of APAC region. Diversifying sales across multiple markets helps in mitigating risk significant loss of revenue if adverse situations arise in any of the markets.

Request 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.

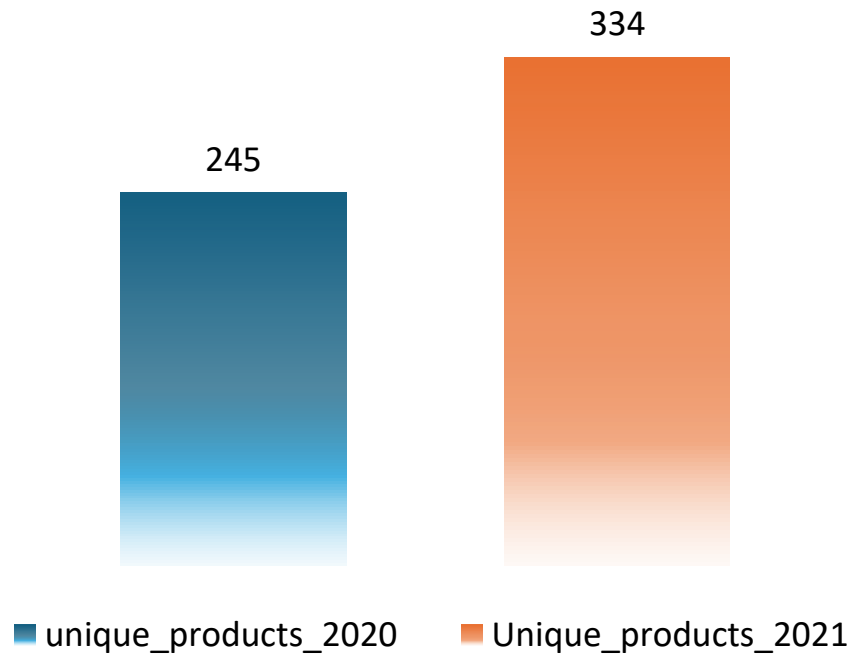
SQL Query

```
with cte1 as
    (SELECT count(distinct product_code) as Unique_products_2020
 FROM fact_sales_monthly
 where fiscal_year=2020),
cte2 as
    (SELECT count(distinct product_code) as Unique_products_2021
 FROM fact_sales_monthly
 where fiscal_year=2021)
select
    cte1.unique_products_2020,
    cte2.Unique_products_2021,
    round(((cte2.Unique_products_2021-cte1.unique_products_2020)/cte1.unique_products_2020)*100,2)
    as Percentage_chg
from cte1,cte2;
```

Output

unique_products_2020	Unique_products_2021	Percentage_chg
245	334	36.33

36.3%
Increase



Insights

- In FY 2020, We had a total of 245 Products but in FY 2021, Our count increased to 334 products a growth of 36.3%
- Atliq hardware is building a strong and dynamic reputation by meeting with the changing needs of the customer

Request 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.

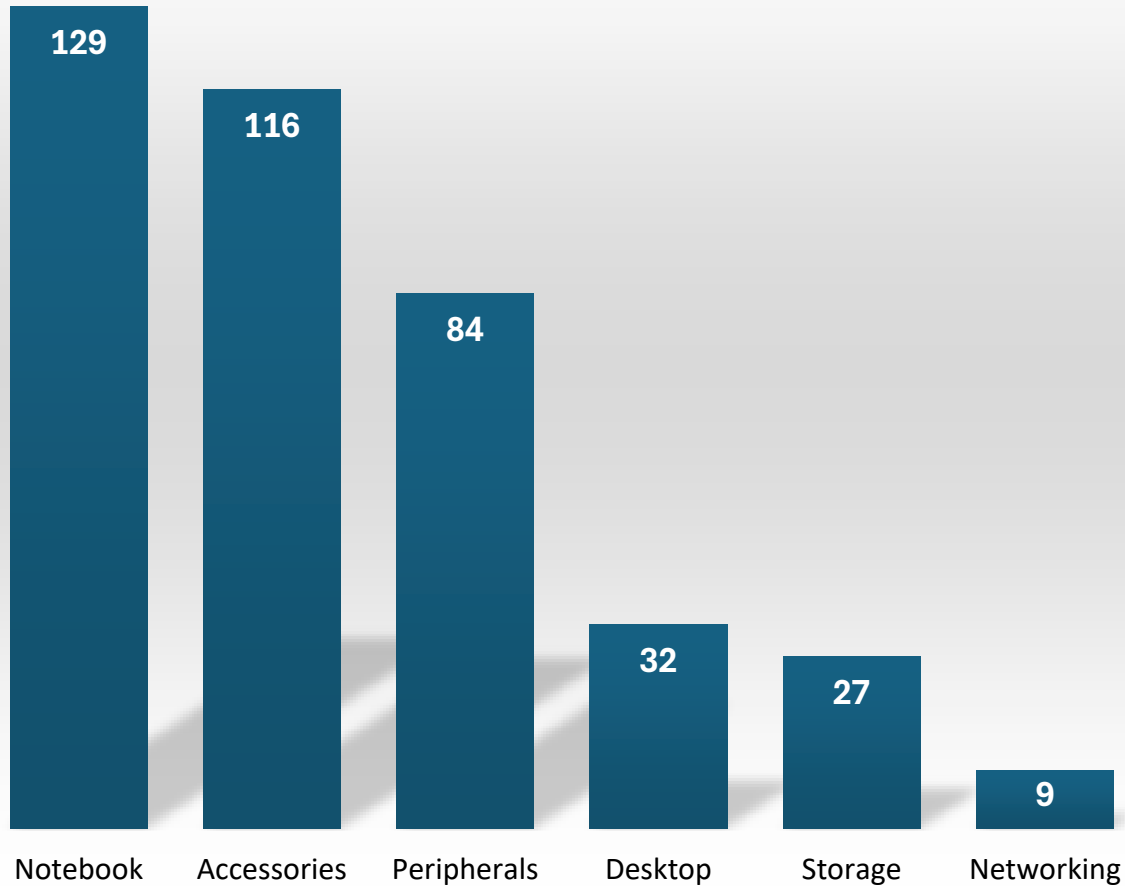
SQL Query

```
SELECT
    segment,
    count(distinct product_code) 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

Product count



Insights

- We have a wide range of products under segment: Notebook, Accessories, and Peripherals averaging around 110 while segment like Desktop, Storage, Networking are lagging with an average of 23 products per segment
- Product Development team needs to evaluate on products that require redesigning as per modern standards and market needs
- Innovation will drive Atliq Hardware's success in the competitive market

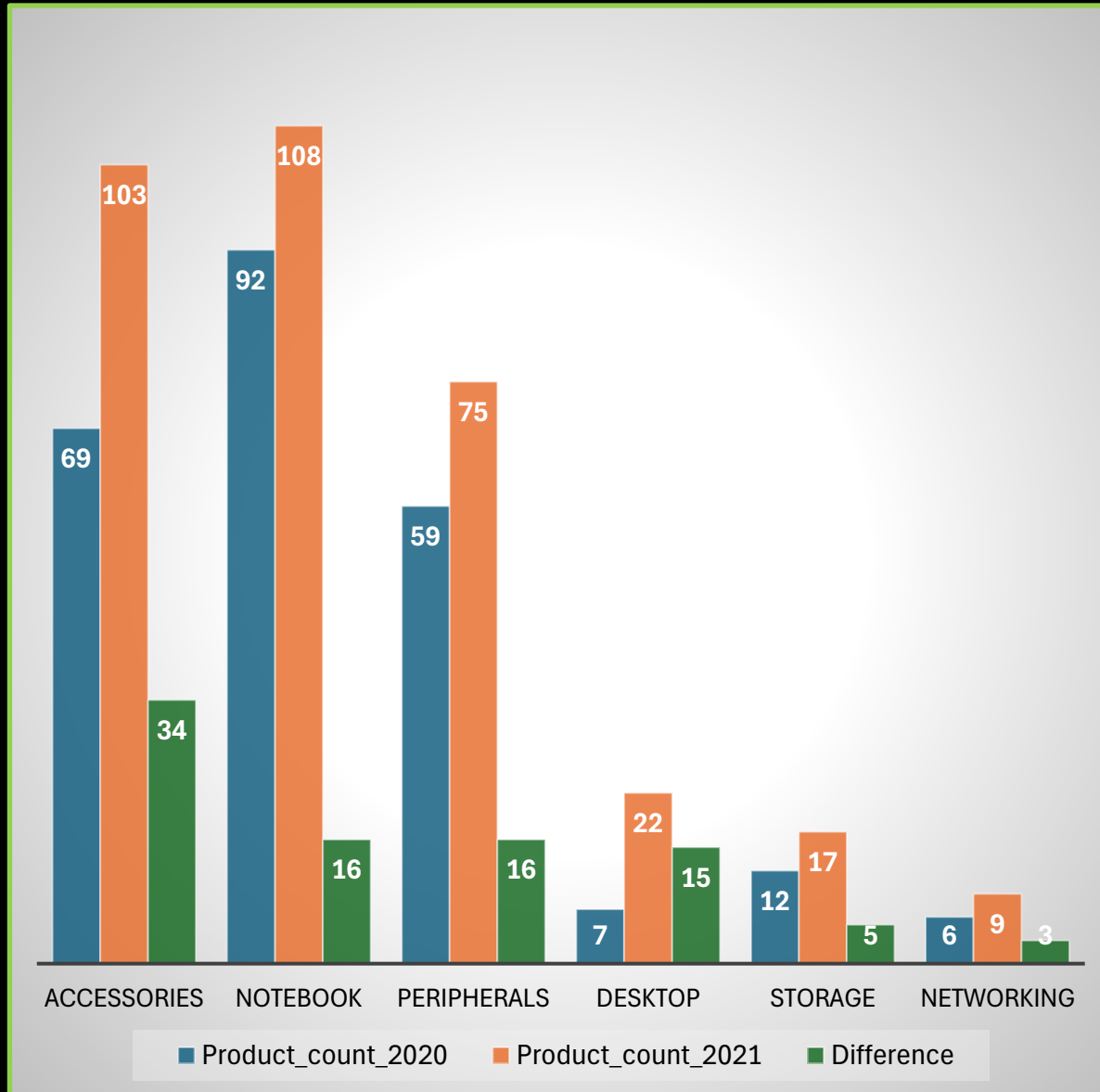
Request 4: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment product_count_2020, product_count_2021, difference

SQL Query

```
with cte1 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 fiscal_year=2020
group by segment),
cte2 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 fiscal_year=2021
group by segment)
select cte1.segment,cte1.Product_count_2020,
cte2.Product_count_2021,abs(Product_count_2020-Product_count_2021) as Difference
from cte1
join cte2
on cte1.segment=cte2.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



Insights

- With the introduction of 34 new products, Accessories segment has the highest increase in number of unique products.
- Notebook and Peripherals each has an increment of 16 new unique products
- Product Development team has done a good job in the Desktop segment by increasing unique products from 7 to 22
- Networking segment had the least growth with only 3 new products since 2020

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

SQL Query

```
SELECT
    m.product_code,p.product,
    m.manufacturing_cost
FROM fact_manufacturing_cost m
join dim_product p
on m.product_code=p.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
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920

Insights

Highest manufacturing cost



AQ HOME Allin 1 Gen 2
(Plus3)
Category: Personal Desktop
240.54\$

Lowest manufacturing cost



AQ Master wired x1 Ms
(Standard 1)
Category: Mouse
0.89\$

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. The final output contains these fields customer_code, customer, average_discount_percentage

SQL Query

```
SELECT
    c.customer_code, c.customer,
    round(avg(pre_invoice_discount_pct)*100,2) as average_discount_pct
FROM dim_customer c
join fact_pre_invoice_deductions pinv
on c.customer_code=pinv.customer_code
where fiscal_year=2021 and market="india"
group by c.customer, c.customer_code
order by average_discount_pct desc
limit 5
```

Output

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

30.83%

30.38%

30.28%

30.25%

29.33%

Flipkart

Viveks

Ezone

Croma

Amazon

Insights

- Flipkart has received the highest pre invoice discount percent 30.83%
- In FY 2021, Average discount provided to all customers in Indian market was 24.16%
- Top 5 Customers have a collective average around 30.21%

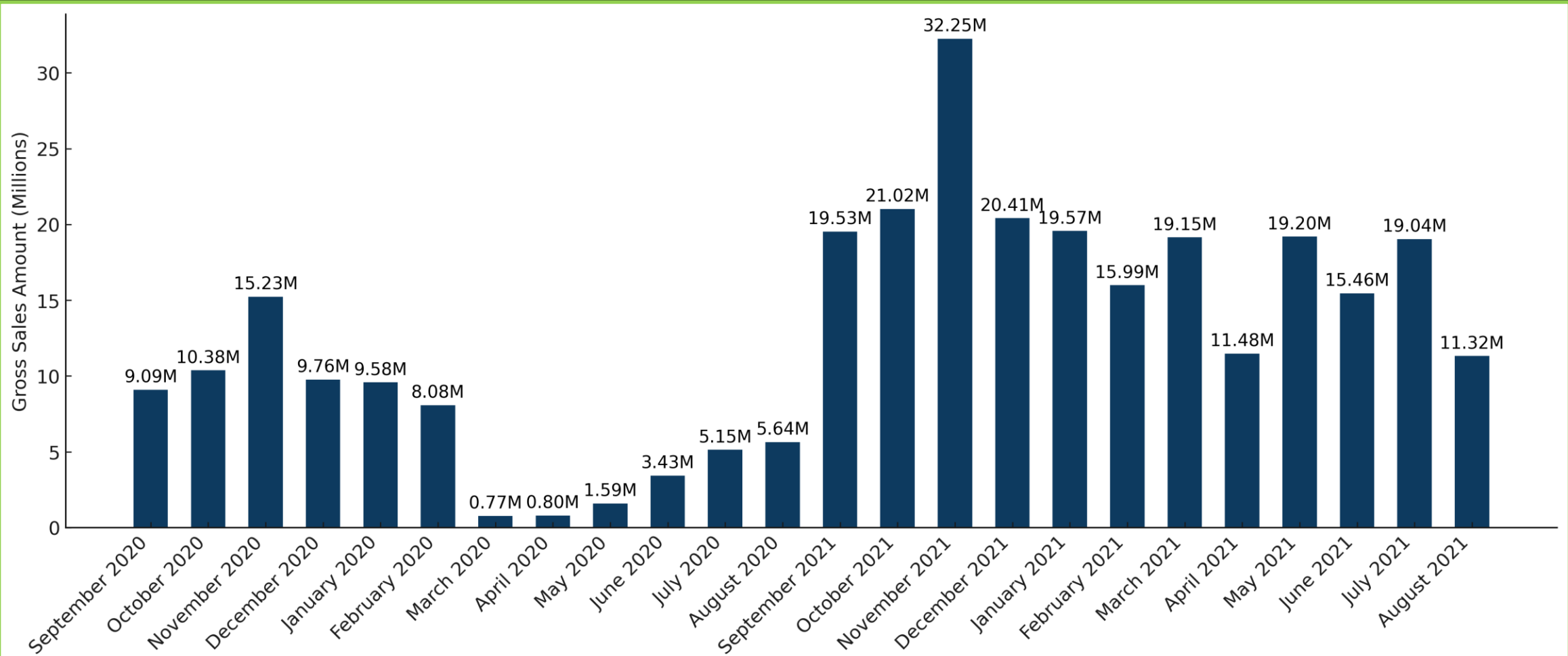
Request 7: Get the complete report of the Gross sales amount for the customer “**Atliq Exclusive**” for each month . This analysis helps to get an idea of low and high-performing months and take strategic decisions. The final report contains these columns: Month, Year, Gross sales Amount

SQL Query

```
SELECT monthname(s.date)as Month, s.fiscal_year as year,
concat(round(sum(g.gross_price*s.sold_Quantity)/1000000,2),"M")
as Gross_Sales_Amount
FROM fact_sales_monthly s
join fact_gross_price g
on s.product_code=g.product_code
join dim_customer c
on s.customer_code=c.customer_code
where c.customer="Atliq Exclusive"
group by monthname(s.date), s.fiscal_year
order by year;
```

Output

Month	year	Gross_Sales_Amount
September	2020	9.09M
October	2020	10.38M
November	2020	15.23M
December	2020	9.76M
January	2020	9.58M
February	2020	8.08M
March	2020	0.77M
April	2020	0.80M
May	2020	1.59M
June	2020	3.43M
July	2020	5.15M
August	2020	5.64M
September	2021	19.53M
October	2021	21.02M
November	2021	32.25M
December	2021	20.41M
January	2021	19.57M
February	2021	15.99M
March	2021	19.15M
April	2021	11.48M
May	2021	19.20M
June	2021	15.46M
July	2021	19.04M
August	2021	11.32M



Insights

- For Atliq Exclusive, Highest sales occurred in the first quarter of each year
- November 2020(15.23M) and November 2021(32.25M) both show strong sales, this suggests strong seasonality, possibly due to holiday shopping
- However, among all highest sales occurred in November 2021(32.25M)
- Sales were quite low in 3rd quarter in the year 2020, especially in march 2020(0.77M)

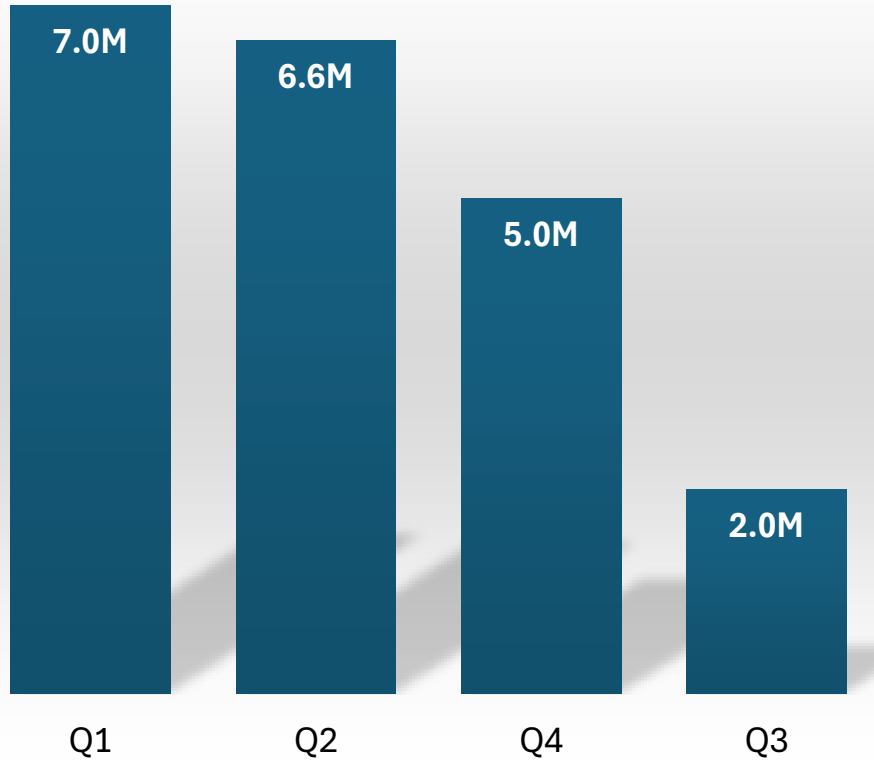
Request 8: In which quarter of 2020, got the maximum total_sold_quantity?
The final output contains these fields sorted by the total_sold_quantity,
Quarter, total_sold_quantity

SQL Query

```
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 Quarter,
    round(sum(sold_quantity),2) as Total_sold_quantity,
    fiscal_year
FROM fact_sales_monthly
where fiscal_year=2020
group by quarter
order by Total_sold_quantity desc
```

Output

Quarter	Total_sold_quantity	fiscal_year
Q1	7005619	2020
Q2	6649642	2020
Q4	5042541	2020
Q3	2075087	2020



Insights

- For FY 2020, Q1(September-November) had the maximum quantity sold (7.0M)
- Q3 was with the least products sold (2.0M)

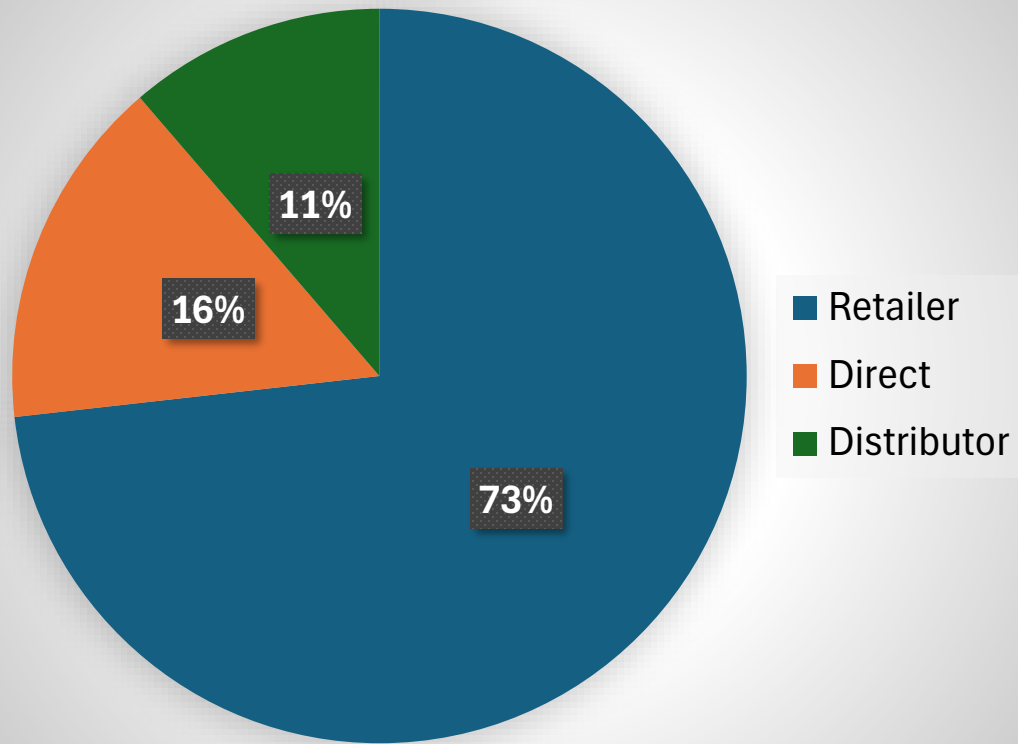
Request 9: Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields, channel, gross_sales_mln, percentage

SQL Query

```
with cte as
(SELECT
    c.channel,
    round( sum(s.sold_quantity*g.gross_price)/1000000,2) as Gross_sales_mln
FROM fact_sales_monthly s
join dim_customer c
on s.customer_code=c.customer_code
join fact_gross_price g
on s.product_code=g.product_code
where s.fiscal_year=2021
group by channel)
select
    *,Gross_sales_mln*100/sum(Gross_sales_mln) over() as percentage
from cte
order by Gross_sales_mln desc
```

Output

channel	Gross_sales_mln	percentage
Retailer	1924.17	73.216922
Direct	406.69	15.475031
Distributor	297.18	11.308047



Insights

- Retailers dominate with 73%, making them the primary sales channel, so optimizing retailer relationships and performance might have the biggest impact
- Direct sales contribute 16%
- Distributors account for only 11%, suggesting that this channel is the least utilized

- **Request 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

SQL Query

```
with cte1 as
(SELECT
    p.division, p.product_code, p.product,
    sum(sold_quantity) as Total_sold_quantity
FROM fact_sales_monthly s
join dim_product p
on s.product_code=p.product_code
where s.fiscal_year=2021
group by p.product,p.division,p.product_code
order by Total_sold_quantity desc),
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
```

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

N&S division

AQ Pen Drive 2 IN 1

701373

AQ Pen Drive DRC

688003

AQ Pen Drive DRC

676245

P&A division

AQ Gamers Ms

428498

AQ Maxima Ms

419865

AQ Maxima Ms

419471

PC division

AQ Digit

17434

AQ Velocity

17280

AQ Digit

17275

Insights

- The Top 3 selling products in N&S division were PEN DRIVES, which were around 7 lakh in quantity
- The Top 3 selling products in P&A division were MOUSE, which were around 4 lakh in quantity
- The Top 3 selling products in PC division were PERSONAL LAPTOPS, which were around 17000 in quantity

Thank You



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