



ATLIQ HARDWARE

# Consumer Goods: Ad-hoc Insights



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# Introduction

Atliq Hardware, a top Indian computer hardware manufacturer, operates globally and It serves a diverse customer.



Atliq Hardware serves a diverse and expanding customer base all over world with **27 countries**.





# Atliq's Product Line

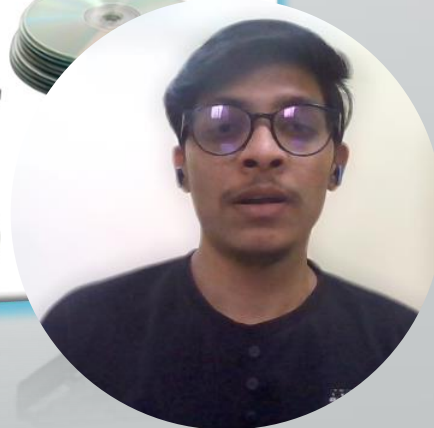
## Computer Peripherals and Accessories



## Personal Computers



## Networking and Storage devices





# Business Scenario

Provide insights to the management by solving  
Ad-hoc requests



# Database Structure

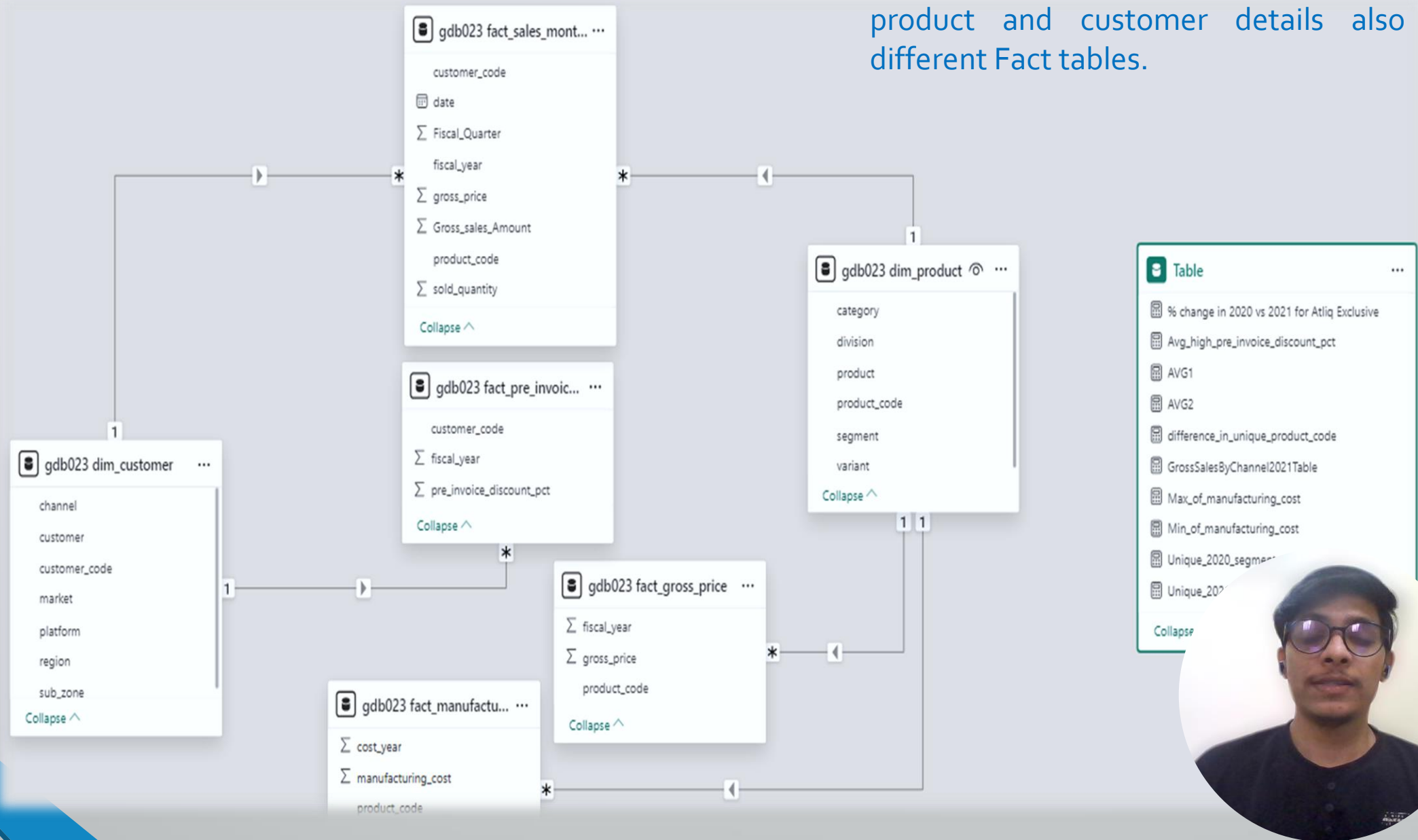
## Overview of Data:

- The database covers two fiscal years: **2020 and 2021**.
- The fiscal year begins **September 1st** and ends **August 31st**.
- With a total of **six key tables**, the structure is designed to give a comprehensive view of customer details, product information, pricing data, manufacturing costs, pre-invoice deductions, and monthly sales figures.



# Input Data :

Atliq Hardware manages key business data across fiscal years 2020 and 2021, along with a different dimension table like product and customer details also 4 different Fact tables.





# Ad-hoc Requests

Ad – hoc Request, Queried Results, Insights and Visualizations



## Request 1 :

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

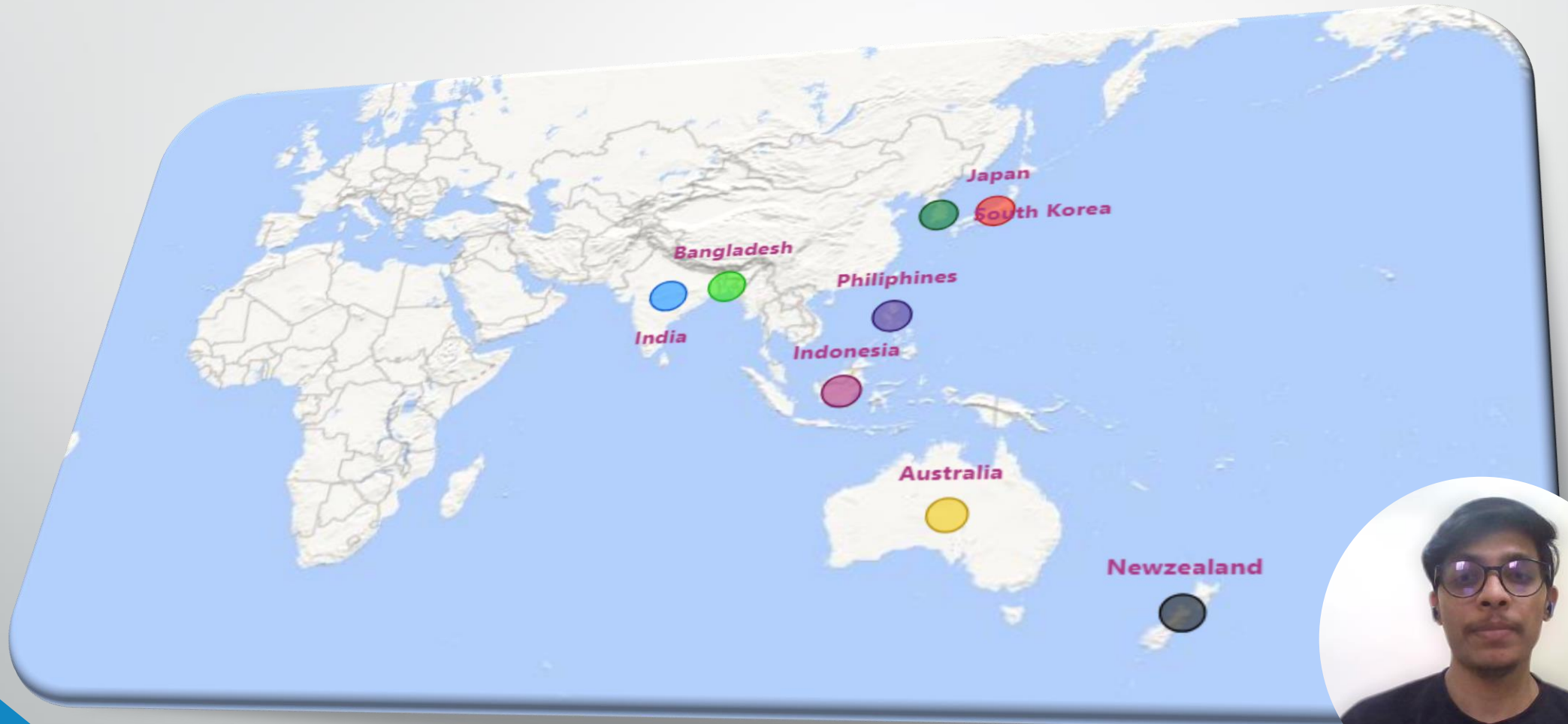
```
SELECT c.market
FROM dim_customer c
WHERE c.customer like '%Atliq Exclusive%'
AND c.region like '%APAC%'
GROUP BY c.market;
```

market
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philippines
South Korea



# Insights:

These **8 countries** represent the key markets where **Atliq Exclusive** has a presence, enabling its growth and business expansion across the **Asia-Pacific** (APAC) region.



## Request 2 :

Generate a report to see what is the percentage of unique product increase in 2021 vs. 2020?

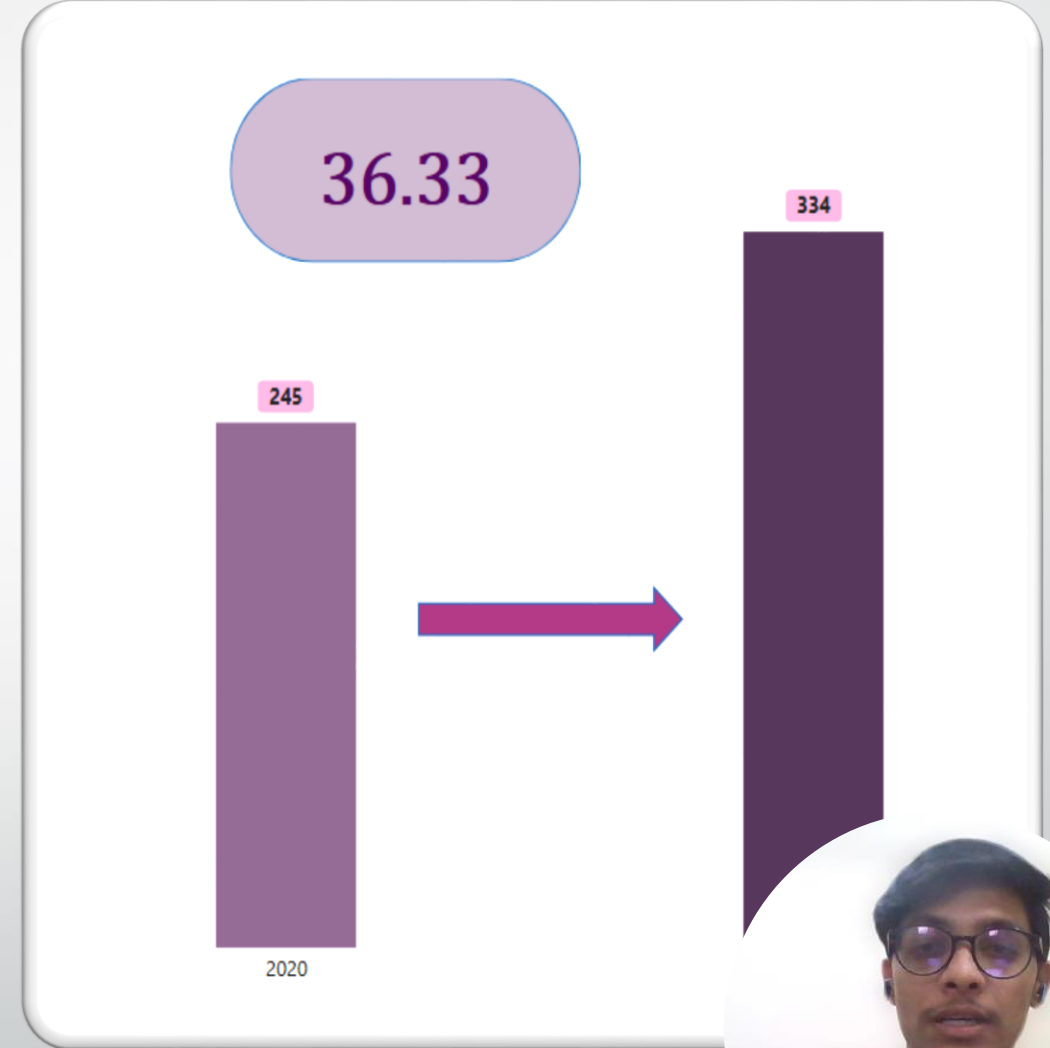
```
WITH unique_product_2020 AS (  
    SELECT count(DISTINCT product_code) AS unique_product_2020  
    FROM fact_sales_monthly  
    WHERE fiscal_year = 2020  
) ,  
  
unique_product_2021 AS (  
    SELECT count(DISTINCT product_code) AS unique_product_2021  
    FROM fact_sales_monthly  
    WHERE fiscal_year = 2021  
)  
  
SELECT unique_2020.unique_product_2020 ,  
       unique_2021.unique_product_2021 ,  
       (unique_2021.unique_product_2021 - unique_2020.unique_product_2020) / unique_2020.unique_product_2020 * 100 AS percentage_chg  
FROM unique_product_2021 unique_2021, unique_product_2020 unique_2020;
```

fiscal_year	Count of product_code
2021	334
2020	245



# Insights:

- **Significant Growth:** Atliq Hardware has experienced a notable increase in its product offerings, with a **36.33% growth** in the number of unique products in 2021 (334) compared to 2020 (245).
- **Product Portfolio Expansion:** This growth suggests a successful strategy in broadening the product portfolio, potentially responding to changing customer needs, market demand, or competitive positioning.
- **Future Outlook:** The increase in unique products could indicate a focus on innovation and diversification, positioning Atliq Hardware for stronger market presence and higher customer satisfaction moving forward.





## Request 3 :

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

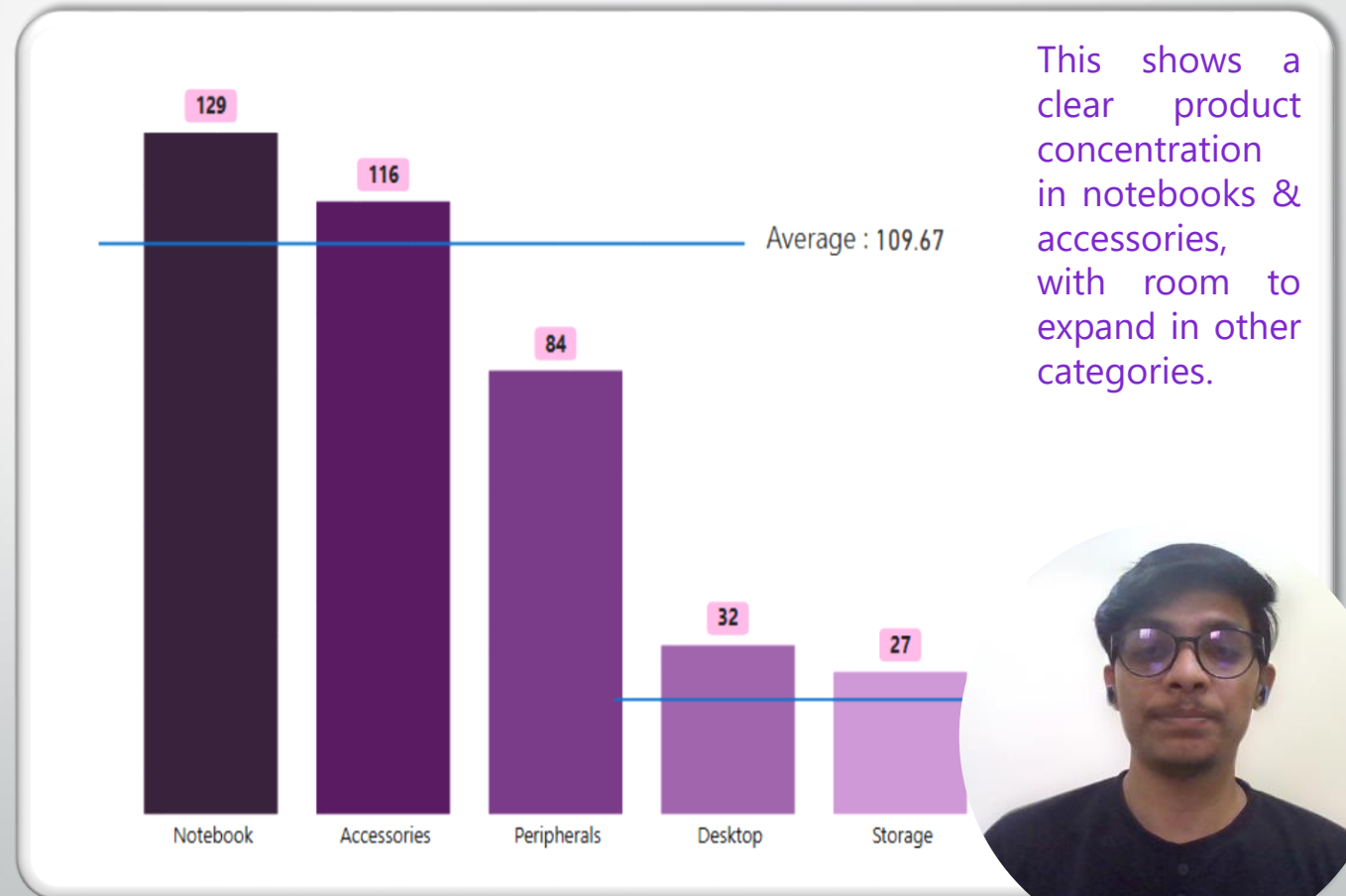
```
SELECT p.segment, count(DISTINCT p.product_code) AS product_count
FROM dim_product p
GROUP BY P.segment
ORDER BY product_count desc;
```

segment	Count of product_code
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9



# Insights:

- **Top Segments:** The **Notebook** and **Accessories** segments dominate with **129** and **116** unique products, reflecting strong focus and demand in these categories.
- **Lower Segments:** **Storage** (**27**) and **Networking** (**9**) have the fewest unique products, suggesting potential for growth or expansion in these areas.
- **Product Focus:** The average product count of the top three segments (**109.67**) is significantly higher than the bottom three (**23**), indicating a concentrated product offering.
- **Growth Opportunities:** The low product counts in **Desktop**, **Storage**, and **Networking** suggest potential areas for strategic investment or market diversification.



## Request 4 :

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

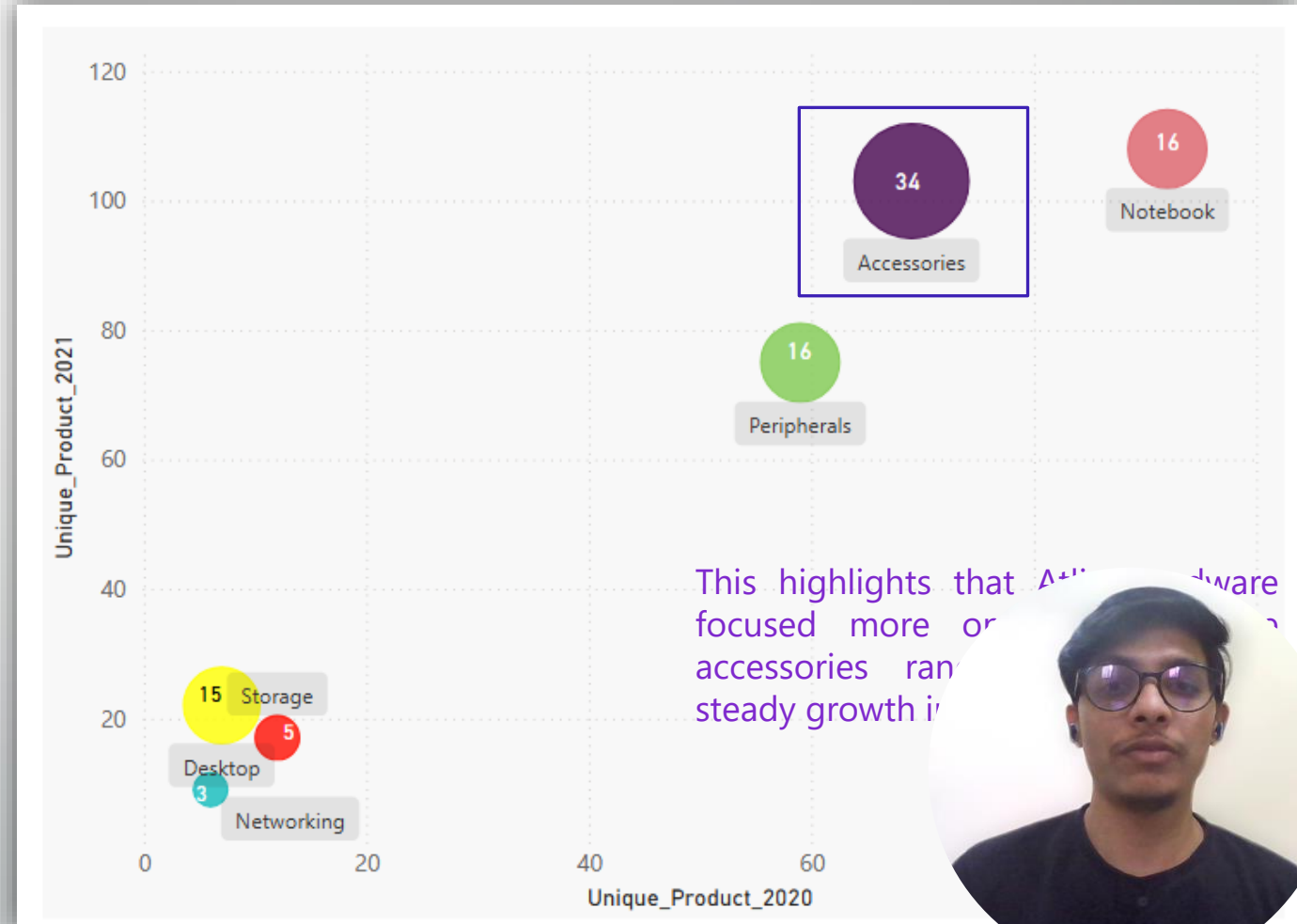
```
WITH product_count_2020 AS (  
    SELECT p.segment, count(DISTINCT p.product_code) AS product_count_2020  
    FROM dim_product p  
    JOIN fact_sales_monthly s  
    USING(product_code)  
    WHERE s.fiscal_year = 2020  
    GROUP BY p.segment  
) ,  
product_count_2021 AS (  
    SELECT p.segment, count(DISTINCT p.product_code) AS product_count_2021  
    FROM dim_product p  
    JOIN fact_sales_monthly s  
    USING(product_code)  
    WHERE s.fiscal_year = 2021  
    GROUP BY p.segment  
)  
  
SELECT product_2020.segment,  
       product_2020.product_count_2020, product_2021.product_count_2021,  
       (product_2021.product_count_2021 - product_2020.product_count_2020) AS difference  
FROM product_count_2020 product_2020  
JOIN product_count_2021 product_2021  
USING (segment)  
ORDER BY difference desc;
```

segment	Unique_Prod uct_2020	Unique_Prod uct_2021	difference_in_uniq ue_product
Notebook	92	108	16
Accessories	69	103	34
Peripherals	59	75	16
Storage	12	17	5
Desktop	7	22	15
Networking	6	9	3



# Insights:

- **Highest Increase:** The **Accessories** segment experienced the largest increase in unique products, with a **34-product difference between 2021 and 2020**. This indicates a significant expansion or improvement in this product category.
- **Moderate Increases:** Other segments such as **Notebook**, **Peripherals**, and **Desktop** showed a more moderate increase, with **16 products** each, suggesting steady growth in these categories.
- **Smaller Increases:** **Storage** and **Networking** saw relatively smaller increases in unique products, with differences of **5** and **3**, respectively, indicating limited growth in these areas.

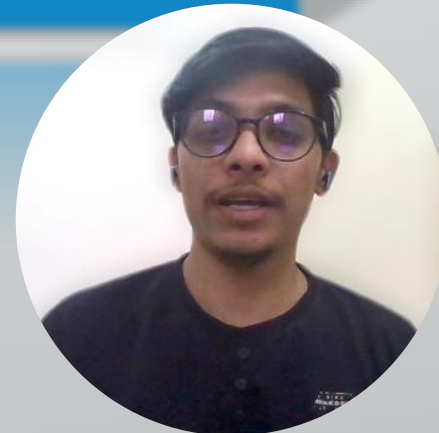


## Request 5 :

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

```
SELECT p.product_code, concat(p.product, " (",p.variant,")"), m.manufacturing_cost
FROM dim_product p
JOIN fact_manufacturing_cost m
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	Personal Desktop
AQ HOME Allin1 Gen 2	240.54
product	Mouse
AQ Master wired x1 Ms	0.89





# Insights:

The "**AQ Master Wired X1**" in the Mouse category has the lowest manufacturing cost at **0.89**, while the "**AQ HOME Allin1 Gen 2**" in the Personal Desktop category has the highest cost at **240.54**, reflecting the difference in complexity and components between peripheral devices and desktop systems.

240.54

AQ HOME Allin1 Gen 2

Personal Desktop



0.89

AQ Master wired x1 Ms

Mouse



## 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.

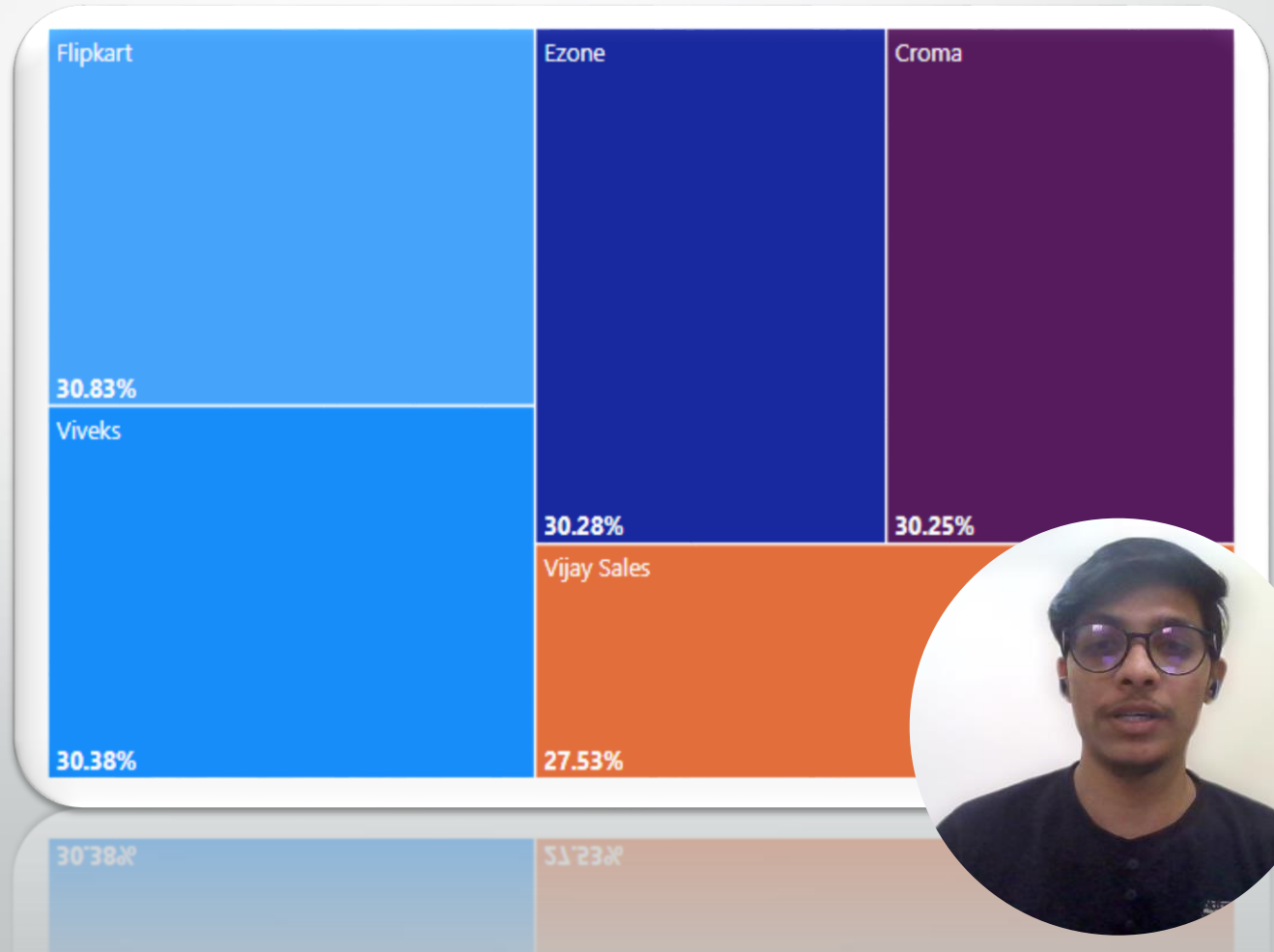
```
SELECT c.customer_code, c.customer,  
       round(avg(p.pre_invoice_discount_pct),4) AS average_discount_percentage  
FROM dim_customer c  
JOIN fact_pre_invoice_deductions p  
  USING (customer_code)  
WHERE p.fiscal_year =2021  
AND c.market = "India"  
GROUP BY c.customer_code, c.customer  
ORDER BY average_discount_percentage DESC  
LIMIT 5;
```

customer	Average of pre_invoice_discount_pct
Flipkart	30.83%
Viveks	30.38%
Ezone	30.28%
Croma	30.25%
Vijay Sales	27.53%



# Insights:

- Flipkart leads with the highest discount at 30.83%, followed closely by Viveks (30.38%), Ezone (30.28%), Croma (30.25%), and Vijay Sales (27.53%).
- These high discounts reflect Atliq Hardware's strategy of offering competitive pricing to major retailers and e-commerce platforms in India.
- The discounts indicate strong business relationships with top customers, emphasizing volume-based sales and market penetration.
- The small variations in discount percentages suggest a consistent pricing approach across key accounts.
- Atliq's strategy of providing high discounts likely aims to increase sales volume, strengthen market share, and maintain competitiveness in the Indian market.



## 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.

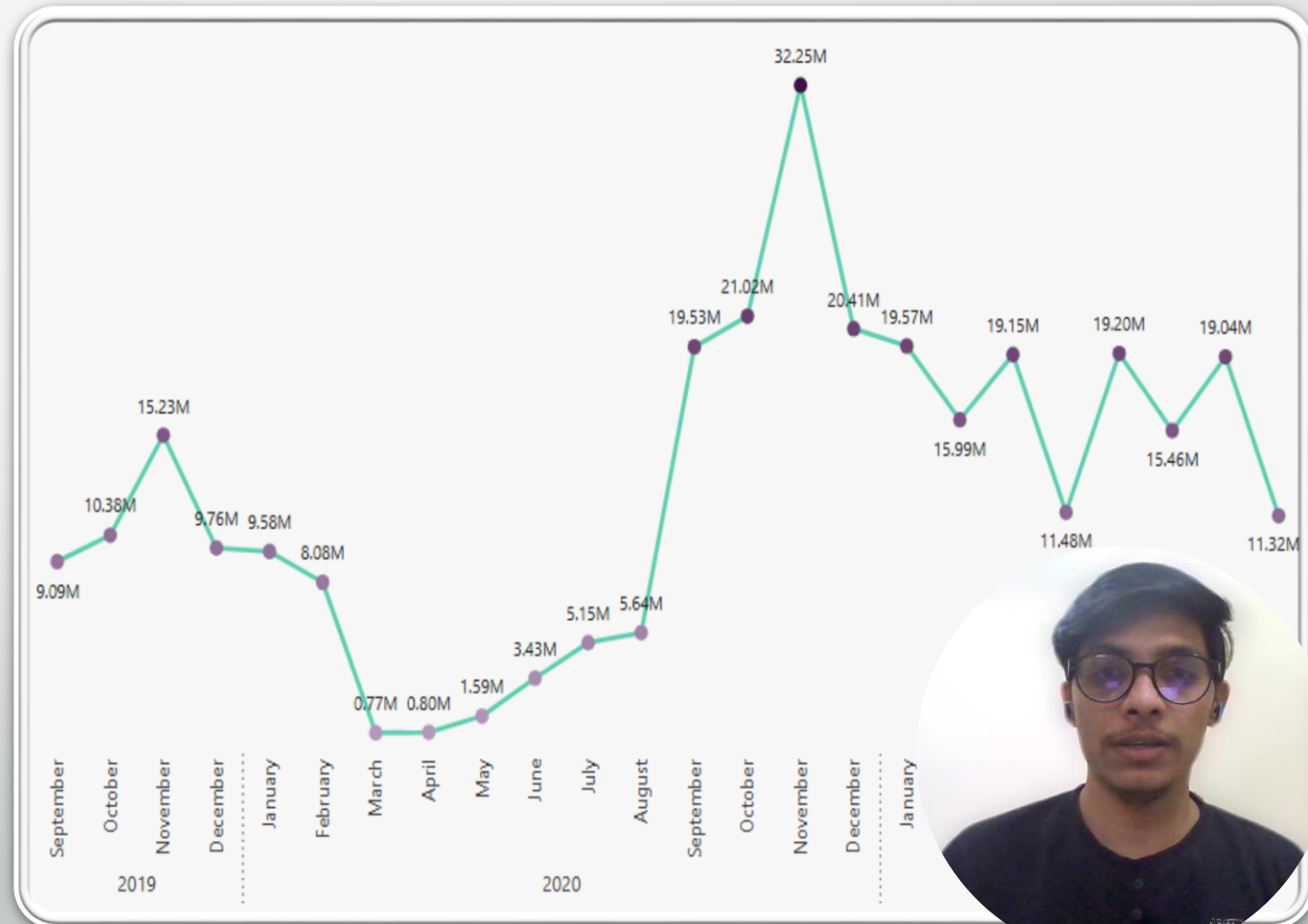
```
SELECT monthname(s.date) month,  
       year(s.date) year,  
       concat(round(sum(g.gross_price * s.sold_quantity)/1000000,2), "M")  
       AS Gross_sales_Amount  
FROM fact_gross_price g  
JOIN fact_sales_monthly s  
ON s.product_code = g.product_code  
JOIN dim_customer c  
ON c.customer_code = s.customer_code  
WHERE c.customer = "Atliq Exclusive"  
GROUP BY Month, Year  
ORDER BY Year ASC;
```

Month	year	Gross_sales_Amount
September	2019	9.09M
October	2019	10.38M
November	2019	15.23M
December	2019	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	2020	19.53M
October	2020	21.02M
November	2020	32.25M
December	2020	20.41M
January	2021	19.57M
February	2021	15.99M
March	2021	19.15M
April	2021	11.4M
May	2021	19M
June	2021	15M
July	2021	19M
August	2021	11M



# Insights:

- The gross sales for Atliq Exclusive showed strong fluctuations across the years.
- High-performing months were November and December in 2020, while April and May 2020 and August 2021 saw the lowest sales. Focus on leveraging peak months and investigating dips in low-performing months for future growth.
- The company should focus on capitalizing during high-performing months, especially year-end periods.
- It needs to address low sales months by investigating causes like market disruptions or seasonal factors.
- Optimizing promotions, enhancing supply chain flexibility, and boosting customer engagement during slower months can drive growth.





## Request 8 :

In which quarter of 2020, got the maximum total\_sold\_quantity?

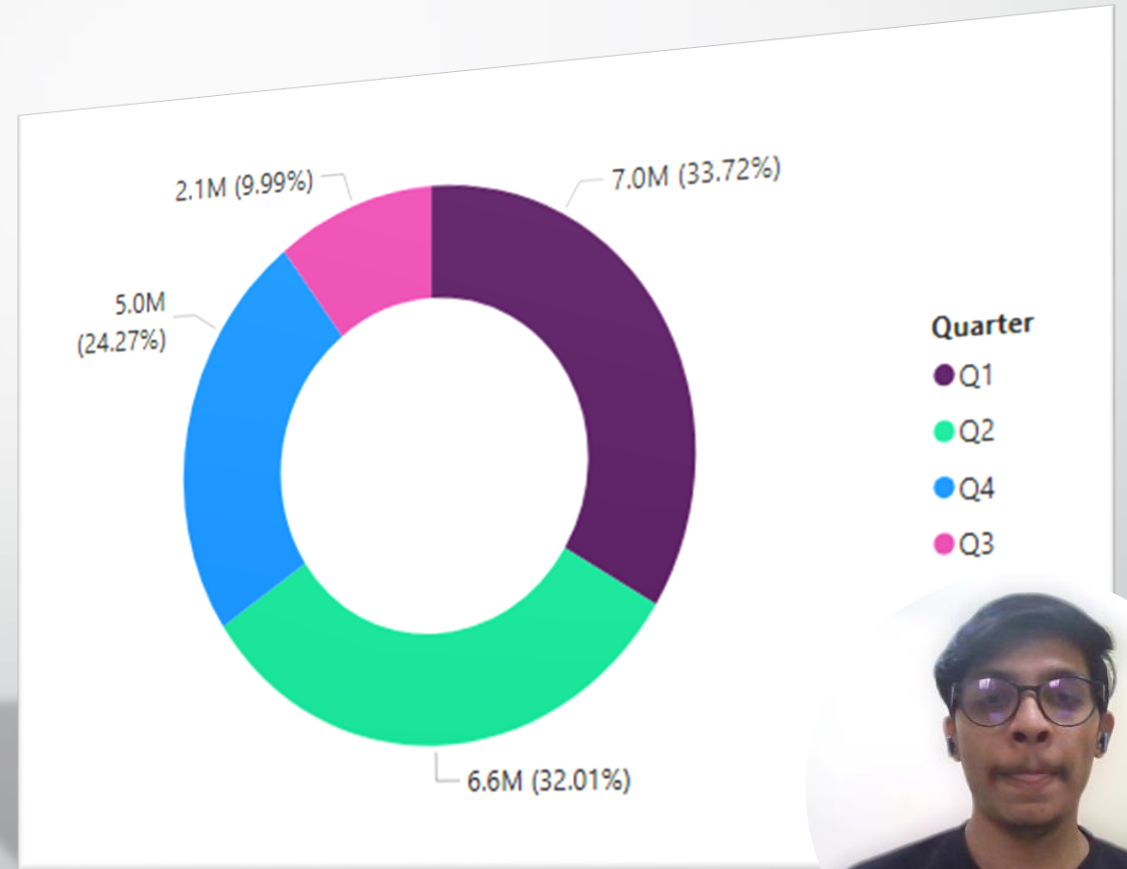
```
SELECT concat("Q",quarter(date_add(s.date,interval 4 month))) AS Quarter,  
       round(concat(sum(sold_quantity)/1000000,"M"),2) AS Total_sold_quantity  
FROM fact_sales_monthly s  
WHERE fiscal_year = 2020  
GROUP BY Quarter  
ORDER BY Total_sold_quantity desc;
```

Quarter	Total_sold_quantity
Q1	7.01M
Q2	6.65M
Q3	2.08M
Q4	5.04M



# Insights:

- Q1 and Q2 performed strongly, indicating that the company's early-year strategies were effective.
- The sharp decline in Q3 suggests there may have been external factors or market challenges that impacted sales, which should be investigated further.
- Q4 demonstrated recovery, but the company should focus on boosting Q3 performance by analyzing potential causes of the drop and implementing corrective strategies.
- To maintain growth, Atliq Hardware can consider reinforcing sales efforts in Q3 through targeted marketing or product adjustments, ensuring a more balanced performance across all quarters.

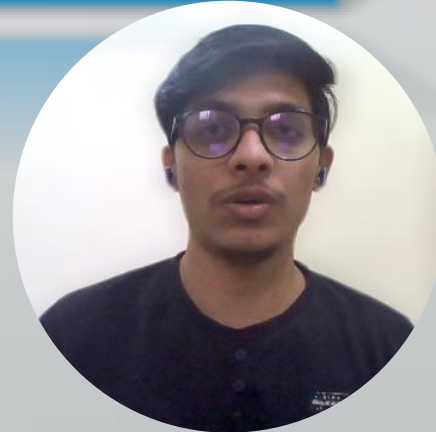


## Request 9 :

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

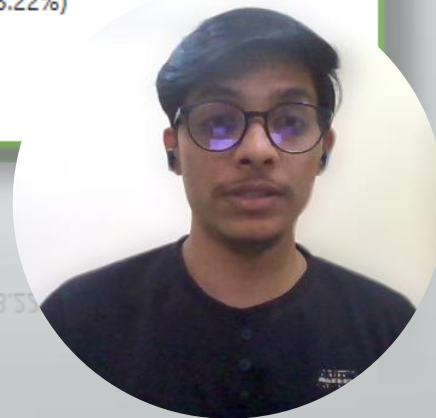
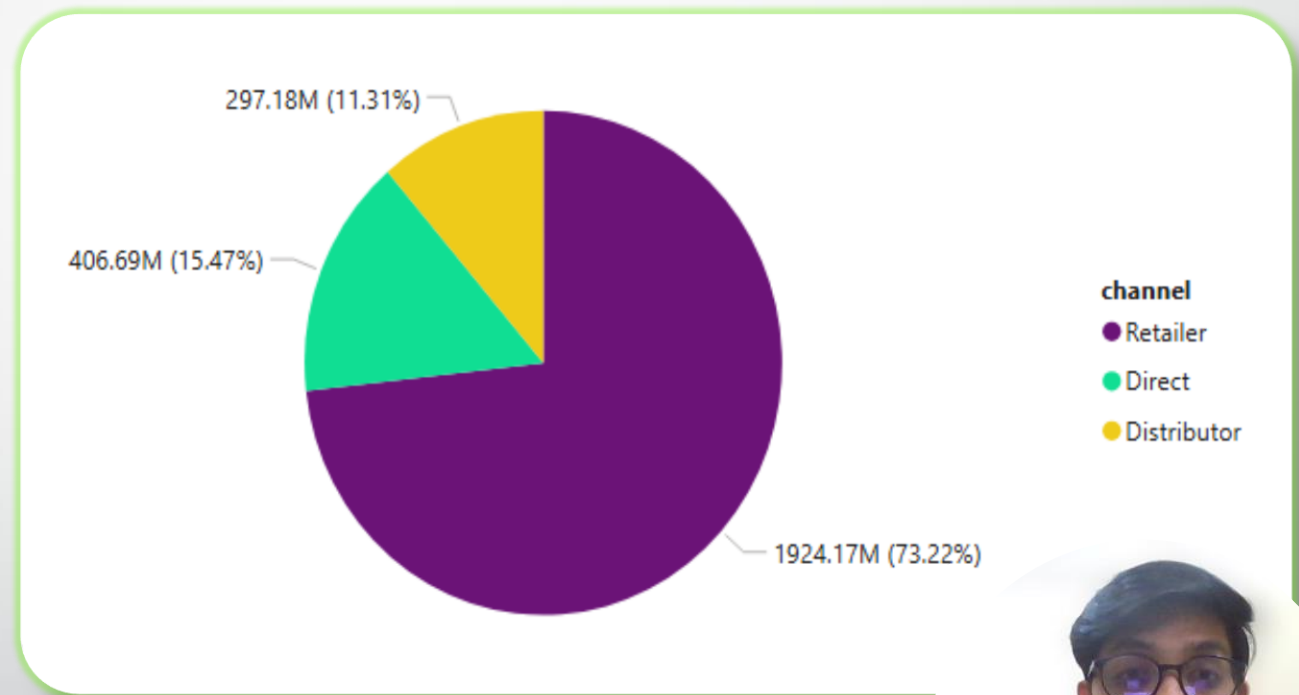
```
WITH total_gross_sales AS (  
  SELECT c.channel,  
         round(sum(g.gross_price * s.sold_quantity)/1000000,2) AS gross_sales_in_millions  
  FROM fact_gross_price g  
  JOIN fact_sales_monthly s  
  ON s.product_code = g.product_code  
  JOIN dim_customer c  
  ON c.customer_code = s.customer_code  
  WHERE s.fiscal_year = 2021  
  GROUP BY c.channel  
)  
  
SELECT *,  
       round(gross_sales_in_millions/sum(gross_sales_in_millions) OVER() *100,2) as percentage  
FROM total_gross_sales  
ORDER BY percentage desc;
```

channel	gross_sales_in_millions	percentage
Retailer	1,924.17M	73.22
Direct	406.69M	15.47
Distributor	297.18M	11.31



# Insights:

- In fiscal year 2021, **retailers** contributed the highest to Atliq Hardware's gross sales, accounting for **73.22%** of total sales, amounting to **1924.17M**. **Direct** sales followed with **15.47%** (**406.69M**), and **distributors** contributed the least at **11.31%** (**297.18M**).
- Retailers played a dominant role in driving gross sales, indicating that the company's **retail strategy was highly successful** and should continue to be a key focus.
- The contribution from direct sales and distributors is relatively low, suggesting potential for growth in these channels.
- Atliq Hardware could explore ways to increase sales through direct sales and distributors, possibly by enhancing relationships, improving incentives, or expanding market reach.



## Request 10 :

Get the Top 3 products in each division that have a high total\_sold\_quantity in the fiscal\_year 2021?

```
WITH A AS (  
  SELECT p.division, p.product_code, concat(p.product, " (",p.variant,")") AS product,  
         sum(s.sold_quantity) AS Total_sold_quantity  
  FROM fact_sales_monthly s  
  JOIN dim_product p  
  USING (product_code)  
  WHERE s.fiscal_year = 2021  
  GROUP BY division, product_code, product, variant  
) ,  
B AS (  
  SELECT * ,  
         dense_rank() OVER(partition by division ORDER BY Total_sold_quantity desc) AS Rnk_order  
  FROM A  
)  
SELECT * FROM B WHERE Rnk_order < 4
```

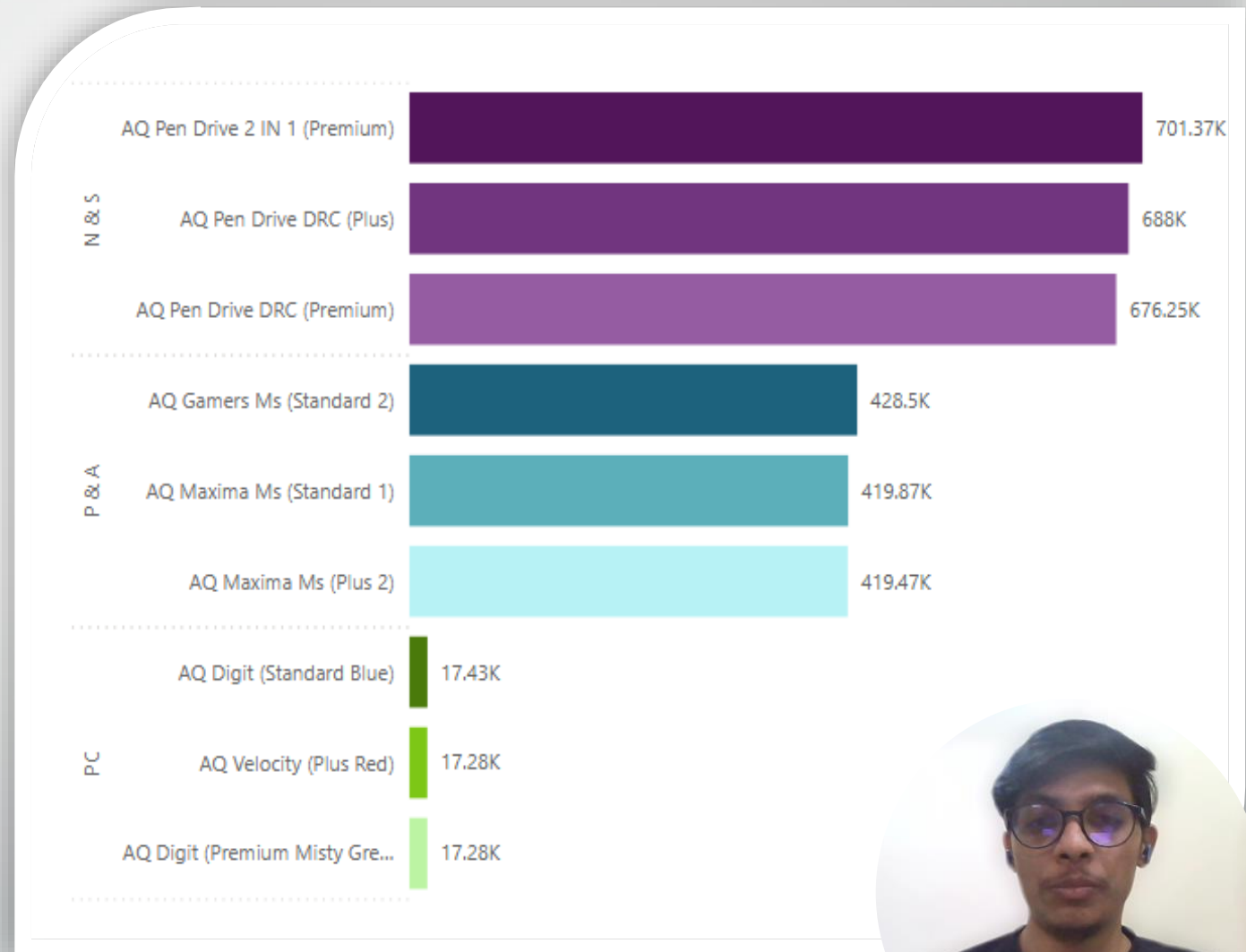
division	product	product_code	Rank	Total_sold_quantity
N & S	AQ Pen Drive 2 IN 1 (Premium)	A6720160103	1	701.4K
N & S	AQ Pen Drive DRC (Plus)	A6818160202	2	688.0K
N & S	AQ Pen Drive DRC (Premium)	A6819160203	3	676.2K
P & A	AQ Gamers Ms (Standard 2)	A2319150302	1	428.5K
P & A	AQ Maxima Ms (Plus 2)	A2520150504	3	419.5K
P & A	AQ Maxima Ms (Standard 1)	A2520150501	2	419.9K
PC	AQ Digit (Premium Misty Green)	A4218110208	3	17.3K
PC	AQ Digit (Standard Blue)	A4218110202		
PC	AQ Velocity (Plus Red)	A4319110306		





# Insights:

- In FY 2021, the Network and Storage (N&S) division was led by AQ Pen Drive 2 IN 1 (Premium) with 701.4k units sold.
- The Personal Computers (PC) division had moderate sales, with AQ Digit (Standard Blue) and AQ Velocity (Plus Red) each selling around 17k units.
- The Peripherals and Accessories (P&A) division excelled with AQ Gamers Ms (Standard 2) leading at 428.5k units sold.
- Atliq Hardware should focus on expanding its successful pen drive and gaming peripherals lines. Additionally, there's potential to grow the PC division through targeted marketing and product innovation.



# Recommendations

- Enhance Market Penetration
- Product Diversification
- Strategic Marketing
- Cost Optimization
- Customer Relationship Management
- Sales Forecasting
- Strategic Sales Focus
- Product Performance Analysis





# THANKYOU

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