

CONSUMER GOODS AD_HOC INSIGHTS

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ABOUT COMPANY

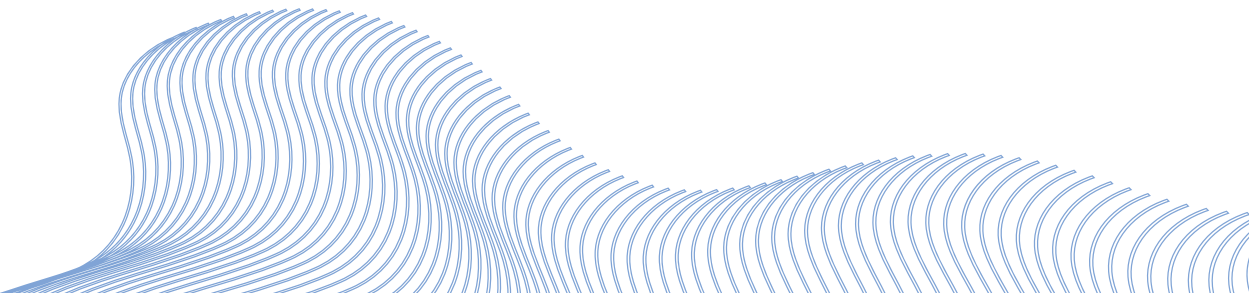
Atliq Hardware is a leading computer hardware manufacturer based in India, recognized for its extensive global reach, operating in 27 countries. Serving a large clientele of 74 customers, Atliq Hardware has firmly established its presence in Asia Pacific (APAC), Europe (EU), North America (NA), and Latin America (LATAM).

Specializing in three key product divisions – Peripherals and Accessories (P & A), Network and Storage (N & S), and Personal Computer (PC) – Atliq Hardware offers a diverse product portfolio, making it a versatile and dependable choice for consumers worldwide.



BUSINESS SCENARIO

Atliq Hardwares' management seeks insights into regional sales trends, top-selling products, and monthly revenue growth to optimize inventory and marketing strategies. They have tasked the data analytics team with an ad hoc request to provide these insights for data-informed decision-making.



DATABASE OVERVIEW

This file provides a comprehensive overview of the tables found in the 'gdb023' (atliq_hardware_db) database. It includes information for six main tables:

1. dim_customer: contains customer-related data
2. dim_product: contains product-related data
3. fact_gross_price: contains gross price information for each product
4. fact_manufacturing_cost: contains the cost incurred in the production of each product
5. fact_pre_invoice_deductions: contains pre-invoice deductions information for each product
6. fact_sales_monthly: contains monthly sales data for each product.

Key points:

- Fiscal years: 2020 and 2021
- The fiscal year starts from September to August

Ad_hoc Requests

Request 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';
```



Insights

Here, we can see atliq exclusive conducts its business across eight diverse regions in Asia-Pacific(APAC) region.

	market
▶	India
	Indonesia
	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh

Ad_hoc Requests

Request 2:

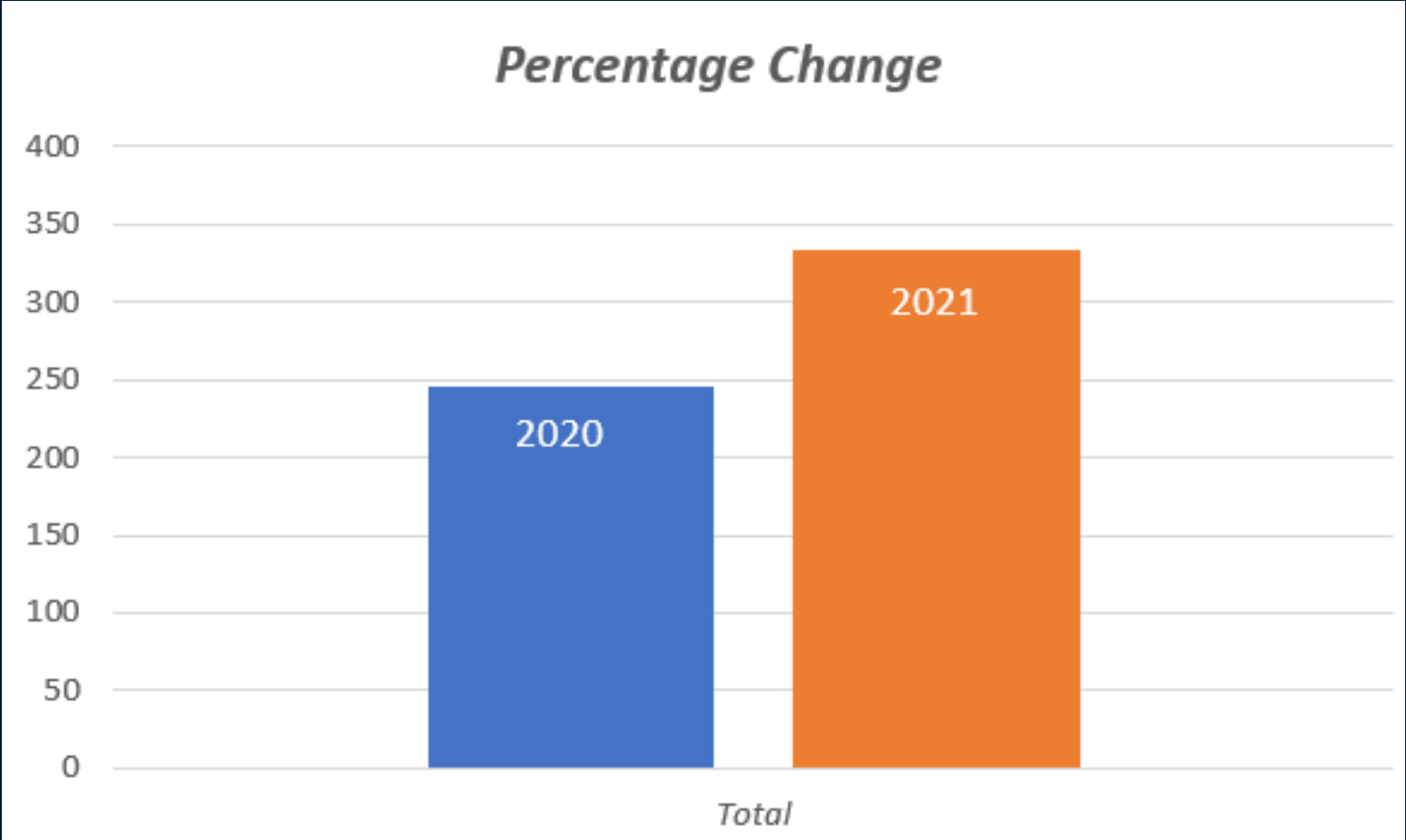
What is the percentage of unique product increase in 2021 vs. 2020?

```
WITH sales AS (  
    SELECT  
        COUNT(DISTINCT CASE WHEN fiscal_year = '2020' THEN product_code END) AS unique_products_2020,  
        COUNT(DISTINCT CASE WHEN fiscal_year = '2021' THEN product_code END) AS unique_products_2021  
    FROM fact_sales_monthly  
)  
SELECT  
    unique_products_2020,  
    unique_products_2021,  
    ROUND((unique_products_2021 - unique_products_2020) / unique_products_2020 * 100, 2) AS percentage_chg  
FROM sales;
```

Request 2:

What is the percentage of unique product increase in 2021 vs. 2020?

	unique_products_2020	unique_products_2021	percentage_chg
►	245	334	36.33



Insights

Atliq Hardwares sold 245 unique products in fiscal year 2020 and 334 unique products in fiscal year 2021, marking a 36.33% increase in the number of unique products sold.

Ad_hoc Requests

Request 3:

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

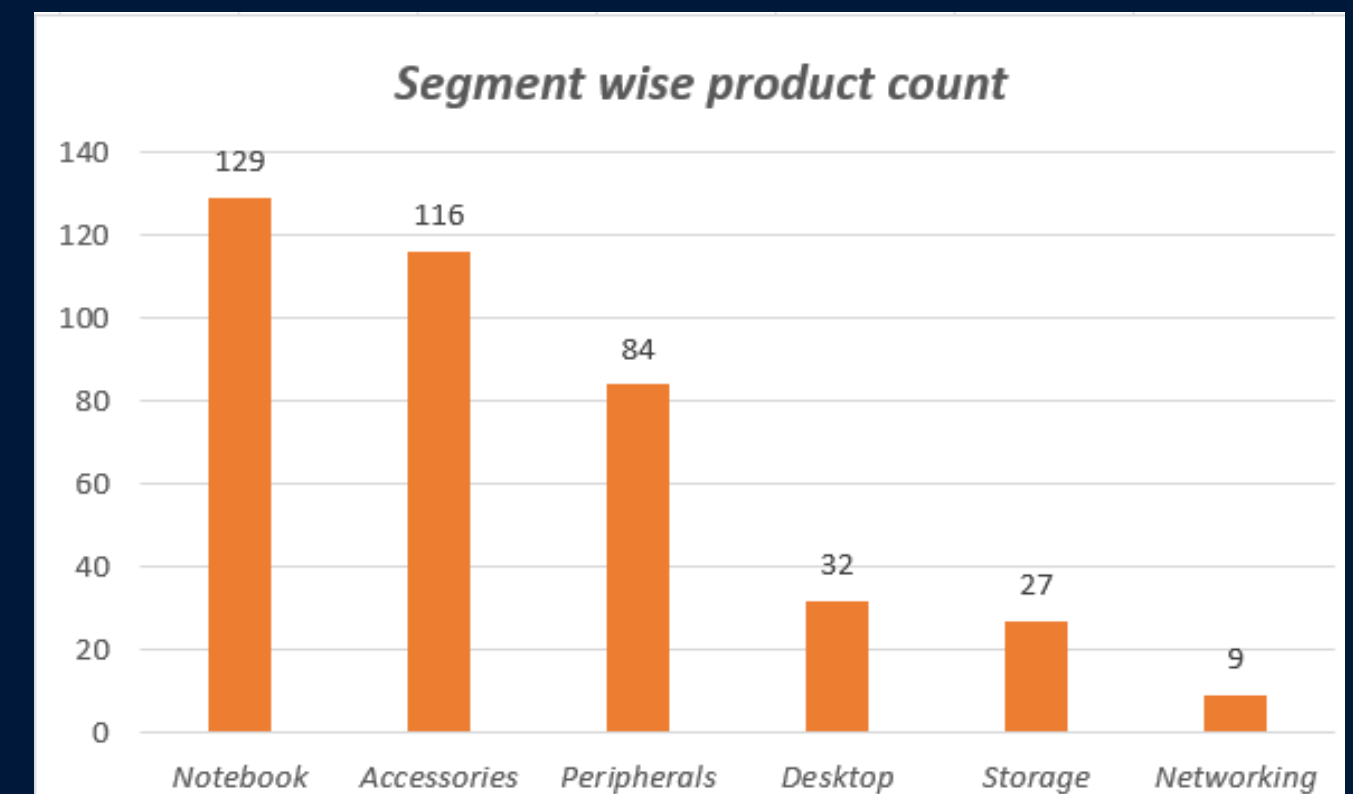
```
SELECT
    segment,
    COUNT(DISTINCT product_code) AS product_count
FROM
    dim_product
GROUP BY
    segment
ORDER BY
    product_count DESC;
```

Ad_hoc Requests

Request 3:

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

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



Insights:

The segment with the highest product count is "Notebook" with 129 distinct product codes.

Ad_hoc Requests

Request 4:

Which segment had the most increase in unique products in 2021 vs 2020?

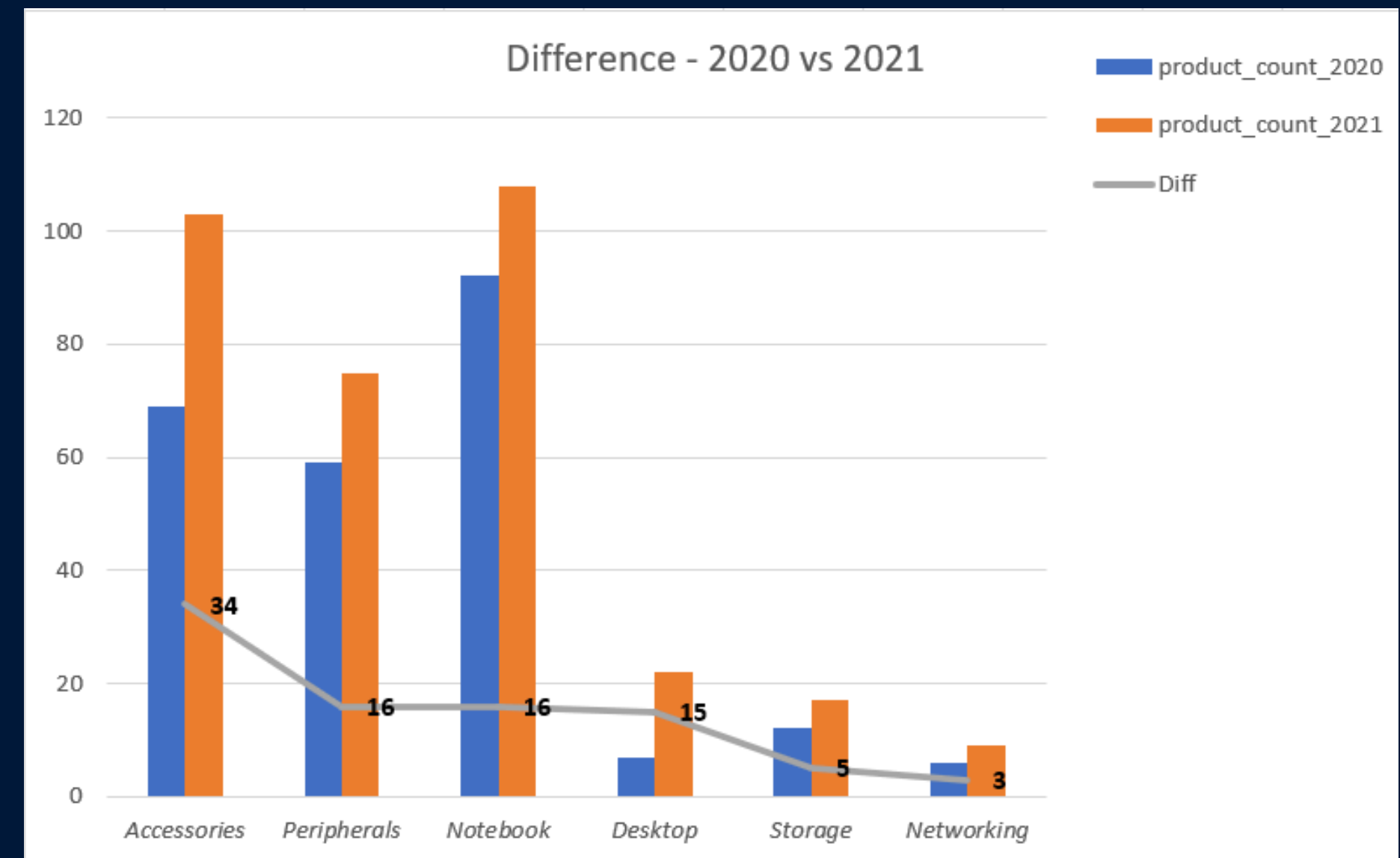
```
WITH cte AS (  
    SELECT  
        segment,  
        COUNT(DISTINCT CASE WHEN fiscal_year = '2020' THEN product_code END) AS products_2020,  
        COUNT(DISTINCT CASE WHEN fiscal_year = '2021' THEN product_code END) AS products_2021  
    FROM fact_sales_monthly f  
    JOIN dim_product d USING (product_code)  
    GROUP BY segment  
)  
SELECT  
    segment,  
    products_2020,  
    products_2021,  
    (products_2021 - products_2020) AS difference  
FROM cte  
ORDER BY difference DESC;
```

Ad_hoc Requests

Request 4:

Which segment had the most increase in unique products in 2021 vs 2020?

segment	products_2020	products_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:

The segment "Accessories" showed the highest increase in unique products sold between fiscal year 2020 and fiscal year 2021, with a difference of 34 products.

Ad_hoc Requests

Request 5 :

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

```
SELECT
    p.product_code,
    p.product,
    m.manufacturing_cost
FROM
    dim_product p
JOIN
    fact_manufacturing_cost m ON p.product_code = m.product_code
WHERE
    m.manufacturing_cost IN (
        SELECT MAX(manufacturing_cost) FROM fact_manufacturing_cost
        UNION
        SELECT MIN(manufacturing_cost) FROM fact_manufacturing_cost
    )
ORDER BY
    m.manufacturing_cost DESC;
```

Insights:

In our product lineup, the manufacturing cost is highest for 'AQ HOME Allin1 Gen 2' and lowest for 'AQ Master wired x1 Ms', with costs approximately 240 and 0.89 respectively.



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

Ad_hoc Requests

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,
    CONCAT(ROUND(AVG(d.pre_invoice_discount_pct) * 100, 2), ' %') AS average_discount_percentage
FROM
    fact_pre_invoice_deductions d
JOIN
    dim_customer c USING (customer_code)
WHERE
    d.fiscal_year = 2021
    AND c.market = 'India'
GROUP BY
    c.customer_code,
    c.customer
ORDER BY
    AVG(d.pre_invoice_discount_pct) DESC
LIMIT 5;
```

Ad_hoc Requests

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.

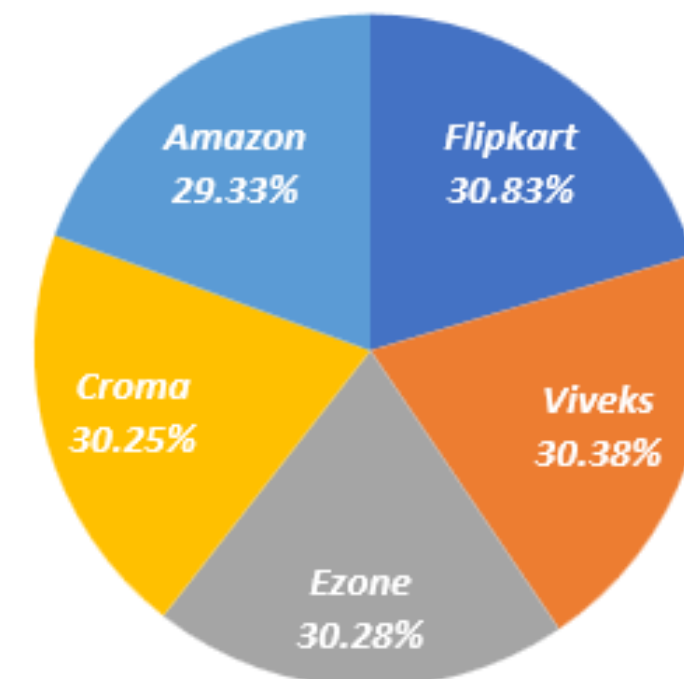
	customer_code	customer	average_discount_percentage
►	90002009	Flipkart	30.83 %
	90002006	Viveks	30.38 %
	90002003	Ezone	30.28 %
	90002002	Croma	30.25 %
	90002016	Amazon	29.33 %



Insights:

Based on the observations for the fiscal year 2021 and focusing on the Indian market, the top 5 customers with the highest average pre-invoice discount percentage are Flipkart, Viveks, Ezone, Croma, and Amazon.

Average discount per customer



Ad_hoc Requests

Request 7:

Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month.

```
SELECT
    MONTHNAME(sm.date) AS Month,
    YEAR(sm.date) AS Year,
    ROUND(SUM(sm.sold_quantity * gp.gross_price), 2) AS Gross_sales_amount,
    CONCAT(ROUND(SUM(sm.sold_quantity * gp.gross_price) / 1000000, 2), 'M') AS Gross_sales_amount_in_millior
FROM
    fact_sales_monthly sm
JOIN
    fact_gross_price gp ON sm.product_code = gp.product_code AND sm.fiscal_year = gp.fiscal_year
JOIN
    dim_customer c ON c.customer_code = sm.customer_code
WHERE
    c.customer = 'Atliq Exclusive'
GROUP BY
    Month, Year
ORDER BY
    Gross_sales_amount DESC;
```


Ad_hoc Requests

Request 7:

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.

	Month	Year	Gross_sales_amount	Gross_sales_amount_in_million
▶	June	2021	9824521.01	9.82M
	November	2019	7522892.56	7.52M
	April	2021	7311999.95	7.31M
	August	2021	7178707.59	7.18M
	October	2019	5135902.35	5.14M
	December	2019	4830404.73	4.83M
	January	2020	4740600.16	4.74M
	September	2019	4496259.67	4.50M
	February	2020	3996227.77	4.00M
	November	2020	20464999.10	20.46M
	August	2020	2786648.26	2.79M
	July	2020	2551159.16	2.55M
	October	2020	13218636.20	13.22M
	December	2020	12944659.65	12.94M
	January	2021	12399392.98	12.40M
	September	2020	12353509.79	12.35M
	May	2021	12150225.01	12.15M
	March	2021	12144061.25	12.14M
	July	2021	12092346.32	12.09M
	February	2021	10129735.57	10.13M
	June	2020	1695216.60	1.70M
	May	2020	783813.42	0.78M
	April	2020	395035.35	0.40M
	March	2020	378770.97	0.38M



Insights:

In November 2020, the company saw its highest monthly sales peak at \$20.46 million, while March 2020 marked its lowest monthly gross sales at \$0.38 million. Fiscal year 2020 ended with total sales of \$39.33 million, and fiscal year 2021 saw a substantial increase to \$142.19 million in total sales.

Ad_hoc Requests

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 Quarter,
    SUM(sold_quantity) AS total_sold_quantity
FROM
    fact_sales_monthly
WHERE
    fiscal_year = 2020
GROUP BY
    1
ORDER BY
    2 DESC;
```

Ad_hoc Requests

Request 8 :

In which quarter of 2020, got the maximum total_sold_quantity?

	Quarter	total_sold_quantity
►	Q1	7005619
	Q2	6649642
	Q4	5042541
	Q3	2075087



Insights:

The sales figures for the respective quarters ranked highest to lowest are Q1, Q2, Q4, and Q3.

Ad_hoc Requests

Request 9 :

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

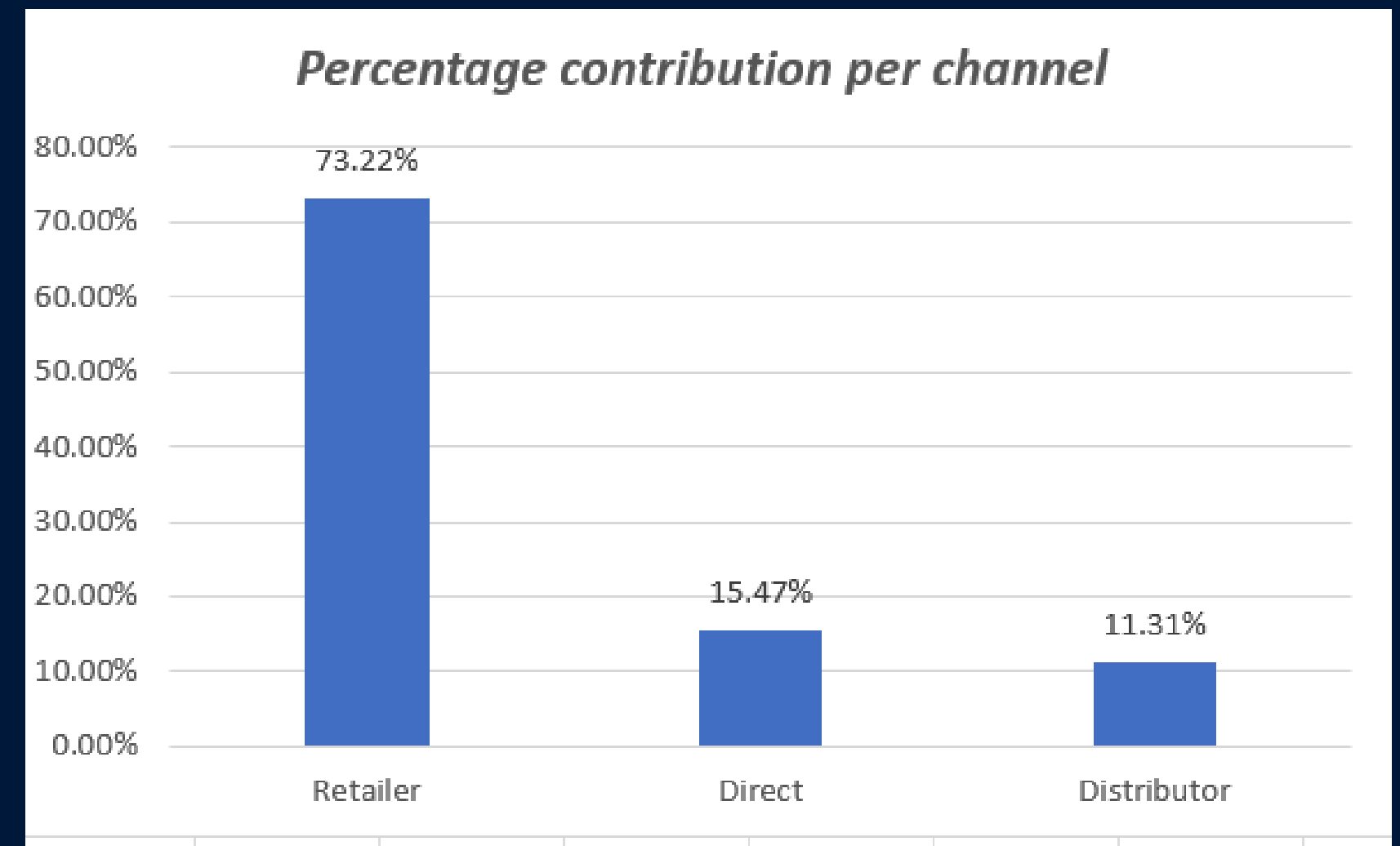
```
WITH gross_sales AS (  
    SELECT  
        c.channel,  
        SUM(fs.sold_quantity * fg.gross_price) AS gross_sales  
    FROM  
        fact_sales_monthly fs  
    JOIN  
        fact_gross_price fg ON fs.product_code = fg.product_code  
    JOIN dim_customer c ON fs.customer_code = c.customer_code  
    WHERE fs.fiscal_year = 2021  
    GROUP BY c.channel  
)  
SELECT  
    channel,  
    ROUND(gross_sales / 1000000, 2) AS gross_sales_mln,  
    ROUND((gross_sales / (SELECT SUM(gross_sales) FROM gross_sales)) * 100, 2) AS percentage  
FROM  
    gross_sales;
```


Ad_hoc Requests

Request 9 :

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

channel	gross_sales_mln	percentage
Retailer	1924.17	73.22 %
Direct	406.69	15.47 %
Distributor	297.18	11.31 %



Insights:

In 2021, retailers played a pivotal role in driving the company's sales revenue, contributing the highest percentage of gross sales at 73.22%. Direct sales comprised 15.47% of the total revenue, while distributors made a comparatively smaller contribution of 11.31%. This highlights retailers as the primary drivers of the company's sales performance, with direct and distributor sales serving as secondary components in its revenue structure.

Ad_hoc Requests

Request 10:

Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

```
WITH top_products AS (  
    SELECT  
        p.division,  
        p.product_code,  
        p.product,  
        SUM(fs.sold_quantity) AS total_sold_quantity,  
        DENSE_RANK() OVER (PARTITION BY p.division ORDER BY SUM(fs.sold_quantity) DESC) AS rank_order  
    FROM  
        fact_sales_monthly fs  
    JOIN  
        dim_product p ON fs.product_code = p.product_code  
    WHERE  
        fs.fiscal_year = 2021  
    GROUP BY  
        p.division, p.product_code, p.product  
)  
  
SELECT *  
FROM top_products  
WHERE rank_order IN (1, 2, 3);
```

Ad_hoc Requests

Request 10:

Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

	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:

The top three best-selling products during fiscal year 2021 were as follows:

- AQ Pen Drive in the Network and Storage (N & S) category,
- AQ Gamer Ms within the Peripherals & Accessories (P & A) category,
- AQ Digit in the Personal Computer (PC) category.

CONCLUSIONS

Here are insights derived from the provided data points:

1. **Sales Peaks:** Atliq Hardwares achieved its highest monthly sales in November 2020 at \$20.46 million, contrasting with a low of \$0.38 million in March 2020.
 2. **Fiscal Year Comparison:** Total sales surged from \$39.33 million in fiscal year 2020 to \$142.19 million in fiscal year 2021, indicating substantial growth.
 3. **Top Products:** In fiscal year 2021, the best-selling products were AQ Pen Drive (N & S), AQ Gamer Ms (P & A), and AQ Digit (PC), driving significant sales in their respective categories.
 4. **Channel Contribution:** 'Atliq Exclusive' led channel sales in fiscal year 2021 with \$55.23 million, underscoring its pivotal role in revenue generation.
 5. **Quarterly Insights:** Q4 of fiscal year 2020 recorded the highest sales volume with 8,000,000 units sold, while Q1 of fiscal year 2021 saw the highest sales revenue of \$50.62 million, signaling a strong start.
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THANK YOU

