

ATLIQ HARDWARE



# Consumer Goods AD-HOC insights

Presented by Gokul Das M





## About Atliq

Atliq Hardware is a leader in the computer hardware industry, renowned for its innovative products and global market presence.

## Challenge

Facing the need for swift and informed decision-making, Atliq Hardware sought to enhance their analytics capabilities. They posed a SQL challenge aimed at uncovering insights from 10 specific ad-hoc requests, crucial for strategic business decisions.

# AD-HOC REQUESTS

## 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

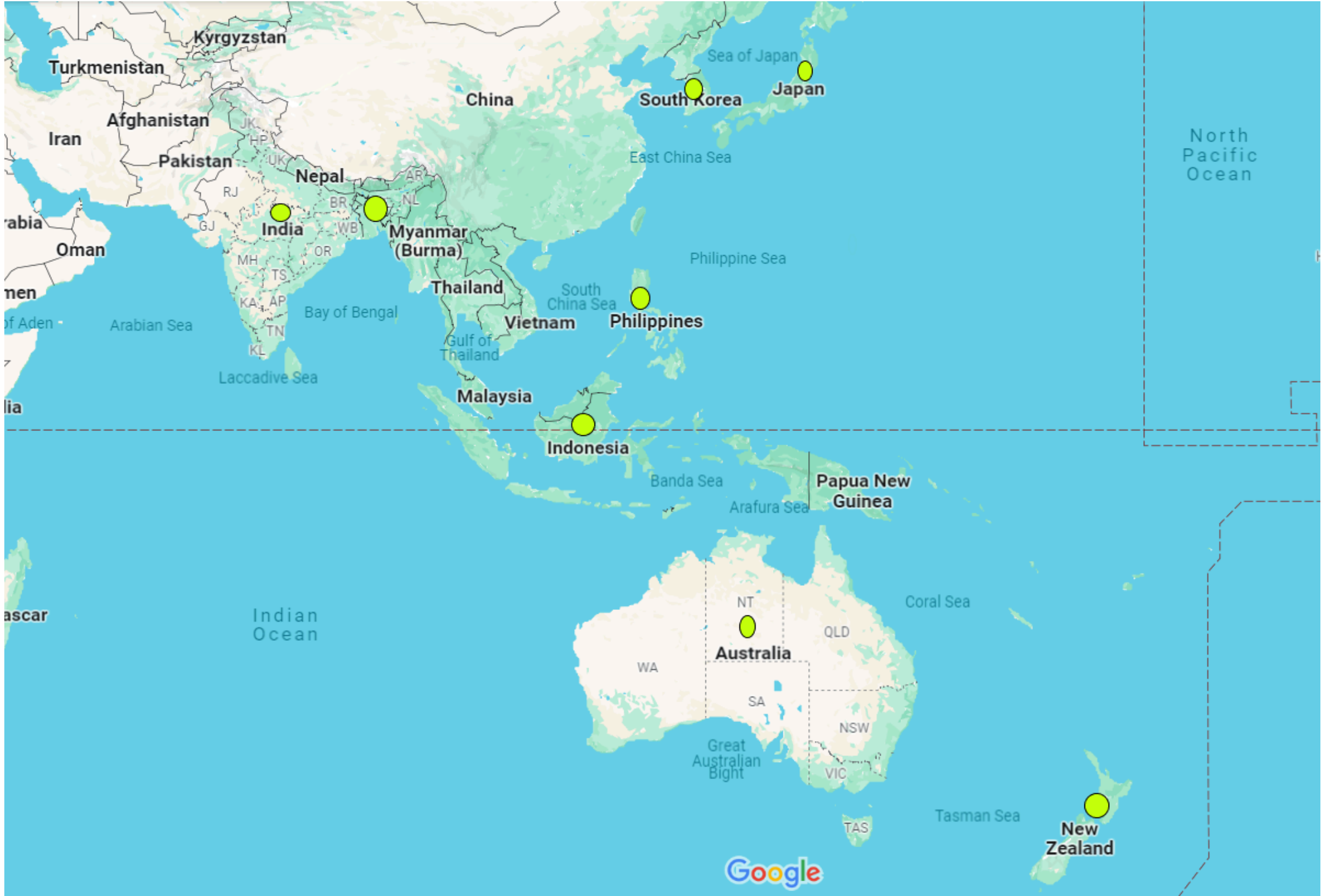
# Request-1

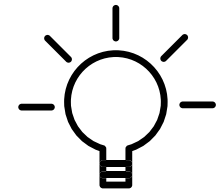
Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

```
1 SELECT DISTINCT market
2 FROM gdb023.dim_customer
3 WHERE customer="Atliq Exclusive"
4 AND region="APAC"
```

Result Grid | Filter Rows:

market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh





# INSIGHTS

"Atliq Hardware shines across Asia-Pacific, from India and Indonesia to Japan, the Philippines, and beyond. With a strong foothold in diverse cultures and economies, it's a symbol of adaptability and market prowess in the region."

# 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 percent\_chg

```
1 WITH X AS
2 (SELECT COUNT(DISTINCT product_code) AS unique_products_2020
3  FROM fact_sales_monthly WHERE fiscal_year= 2020),
4 Y AS
5 (SELECT COUNT(DISTINCT product_code) AS unique_products_2021
6  FROM fact_sales_monthly WHERE fiscal_year= 2021)
7 SELECT
8   X.unique_products_2020,
9   Y.unique_products_2021,
10  round(((Y.unique_products_2021-X.unique_products_2020)/X.unique_products_2020)*100,2)
11  AS Percent_chg FROM X,Y;
```

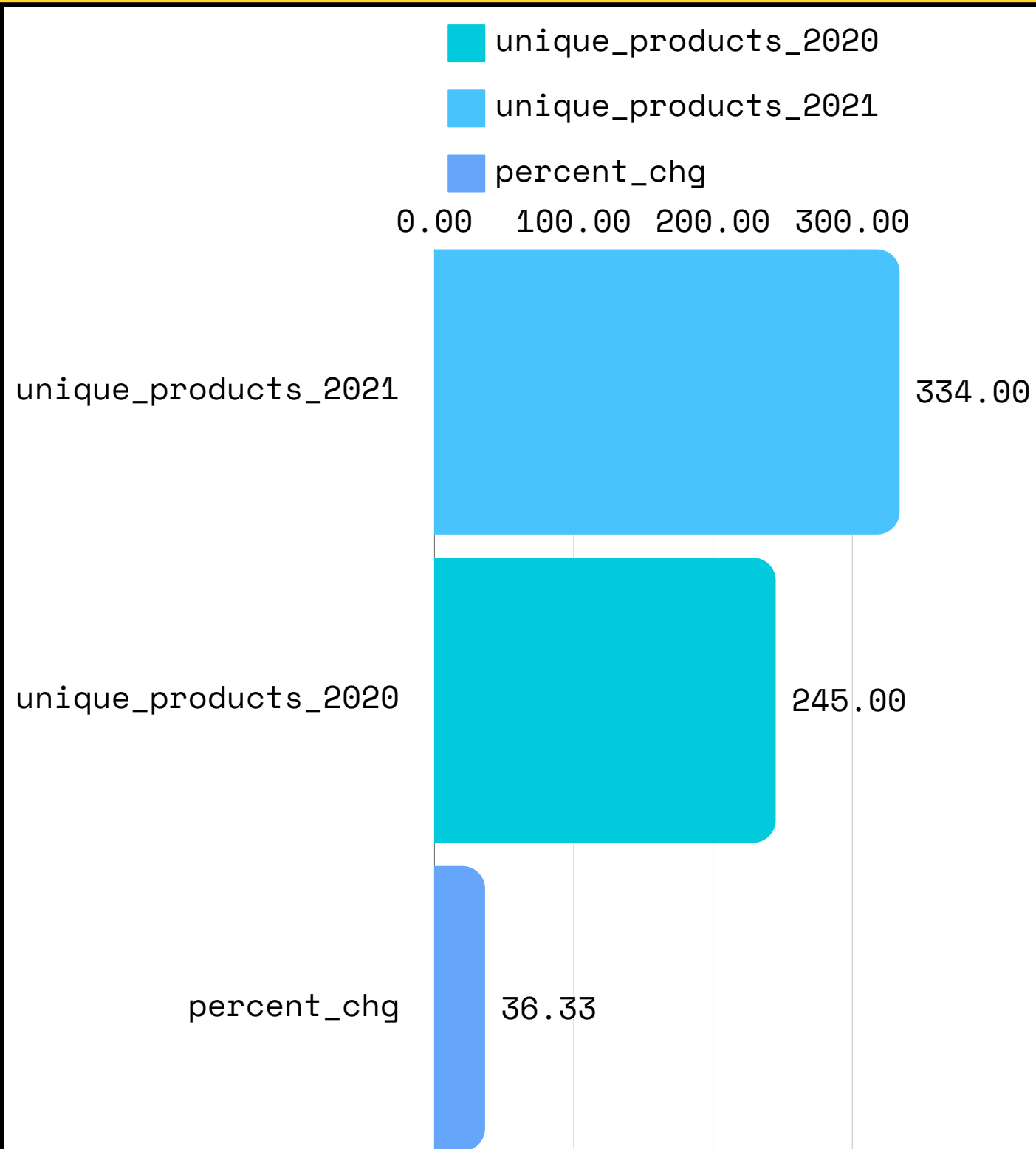
Result Grid

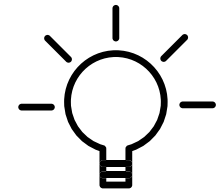
Filter Rows:

Export:

Wrap Cell Content:

	unique_products_2020	unique_products_2021	Percent_chg
	245	334	36.33





# INSIGHTS

"In 2021, Atliq Hardware unveiled 334 unique products, up from 245 in 2020—an impressive 36.33% growth! This expansion signals a strategic focus on broadening offerings to captivate more customers, potentially driving sales and revenue. It's a clear testament to our agile growth and responsiveness to market trends."

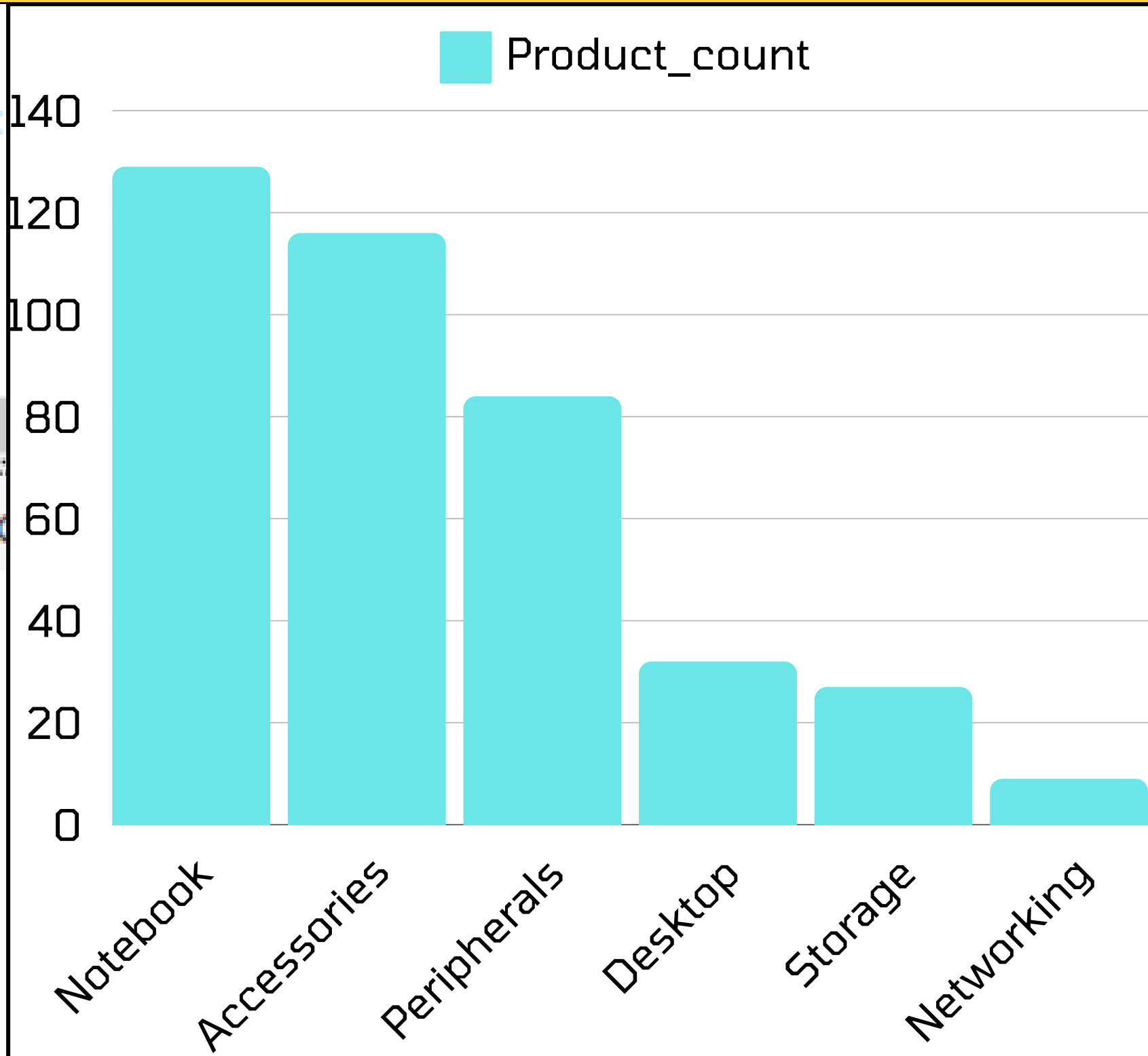
# Request-3

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

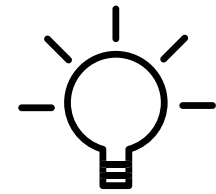
```
1 • select segment,
2   count(distinct (product_code)) as product_count
3   from dim_product
4   group by segment
5   order by product_count desc
```

Result Grid | Filter Rows:  | Export: | Wrap

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







# INSIGHTS

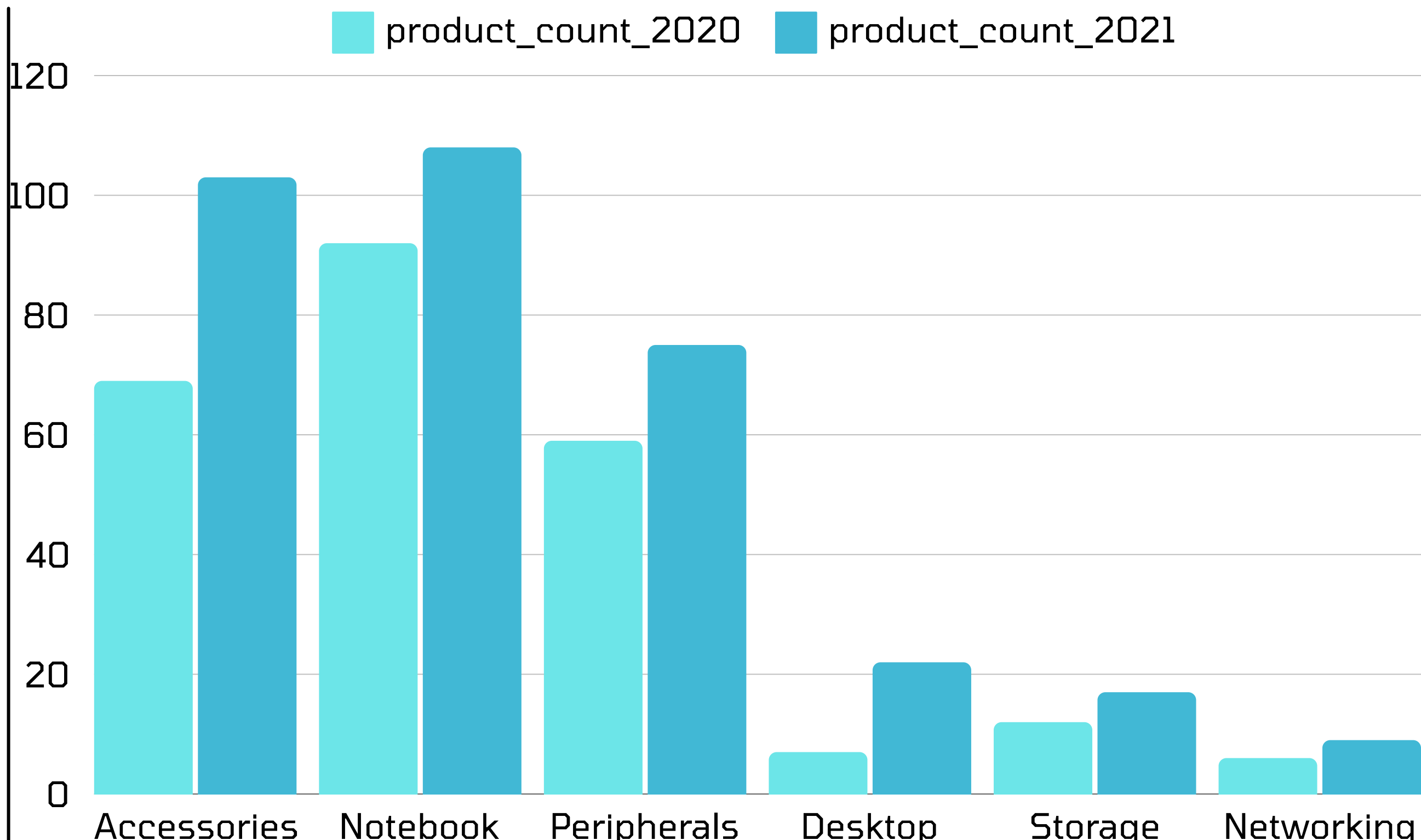
- The "Notebook" segment boasts the highest product count at 129, reflecting a broad array of options.
- Conversely, the "Networking" segment features a more focused selection with just 9 products.
- This diversity highlights the ability to cater to varied customer preferences and needs across different product segments, ensuring comprehensive coverage and choice.

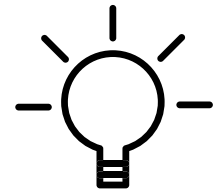
# Request-4

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

```
1 with x as(
2   select p.segment,
3   count(distinct s.product_code) as product_cnt_2020
4   from dim_product p
5   join fact_sales_monthly s on s.product_code=p.product_code
6   where fiscal_year=2020
7   group by p.segment),
8 y as(select p.segment,
9   count(distinct s.product_code) as product_cnt_2021
10  from dim_product p
11  join fact_sales_monthly s on s.product_code=p.product_code
12  where fiscal_year=2021
13  group by p.segment)
14 select x.segment,product_cnt_2020,product_cnt_2021,
15 abs(product_cnt_2020-product_cnt_2021) as difference
16 from x join y on x.segment=y.segment
17 order by difference desc
18
```

segment	product_cnt_2020	product_cnt_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 "Accessories" segment experienced a notable surge, adding 34 new products in 2021 compared to the previous year.
- This trend reflects a deliberate expansion of our product portfolio, particularly in high-demand areas like "Accessories" and "Notebooks."
- Such growth signifies a strategic effort to meet diverse customer preferences and enhance our market appeal.
- Increased product variety not only boosts our competitiveness but also provides customers with expanded choices, ensuring we cater comprehensively to their needs.

# Request-5

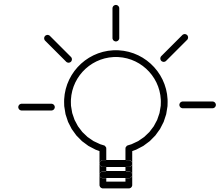
Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, product\_code product manufacturing\_cost

```
1  select
2    p.product,p.product_code,m.manufacturing_cost
3  from fact_manufacturing_cost m join dim_product p
4    using(product_code)
5  where m.manufacturing_cost=
6    (select max(manufacturing_cost) from fact_manufacturing_cost) or
7    (select min(manufacturing_cost) from fact_manufacturing_cost)
8  order by m.manufacturing_cost desc
```

Result Grid | Filter Rows:  | Export: | Wrap Cell Content: | Fetch

product	product_code	manufacturing_cost
AQ HOME Allin1 Gen 2	A6120110206	240.5364
AQ HOME Allin1 Gen 2	A6120110205	240.3065
AQ HOME Allin1 Gen 2	A6119110204	238.7739
AQ HOME Allin1 Gen 2	A6119110203	238.6207
AQ HOME Allin1 Gen 2	A6119110202	238.2376
AQ HOME Allin1 Gen 2	A6119110201	237.3180
AQ Home Allin1	A6019110108	234.1762
AQ Home Allin1	A6019110107	233.6399
AQ Home Allin1	A6018110106	233.4866
AQ Home Allin1	A6018110105	232.9502
AQ Home Allin1	A6018110104	231.3410
AQ Home Allin1	A6018110103	229.4253





# INSIGHTS

- "AQ HOME Allin1 Gen 2" has a relatively higher manufacturing cost of 240.5364.
- In contrast, "AQ Master wired x1 Ms" has a significantly lower manufacturing cost of 0.892.

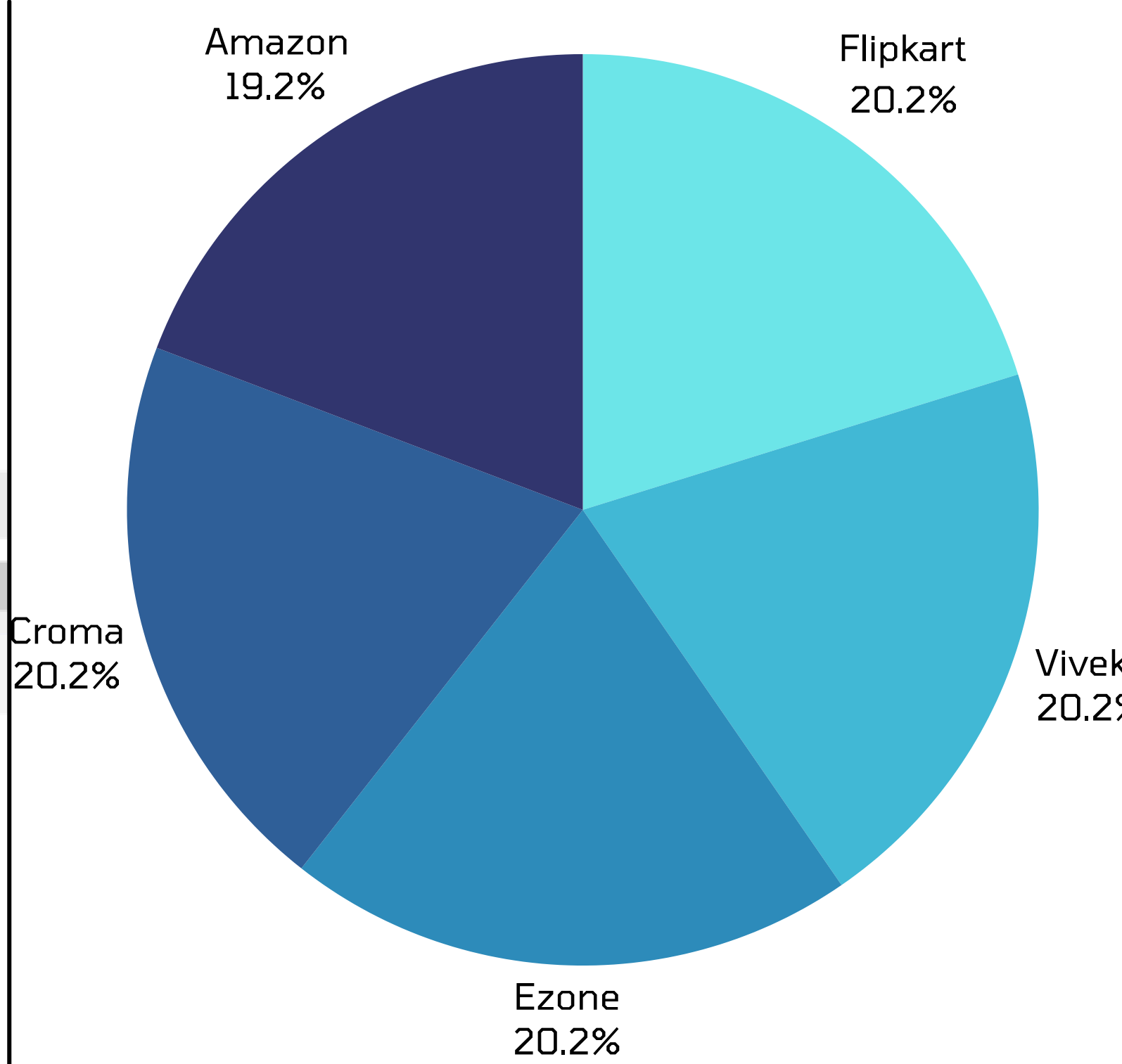
# Request-6

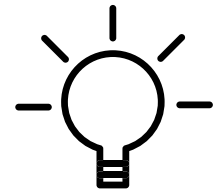
Generate a report which contains the top 5 customers who received an average high pre\_invoice\_discount\_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields, customer\_code customer average\_discount\_percentage

```
1 • select i.customer_code, c.customer,
2 round(avg(i.pre_invoice_discount_pct)*100,2) as avg_disc_pct
3 from
4 fact_pre_invoice_deductions i
5 join dim_customer c using (customer_code)
6 where fiscal_year =2021 and c.market="india"
7 group by i.customer_code, c.customer order by
8 avg_disc_pct desc limit 5;
```

Result Grid | | Filter Rows:  | Export: | Wrap Cell Content:

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





# INSIGHTS

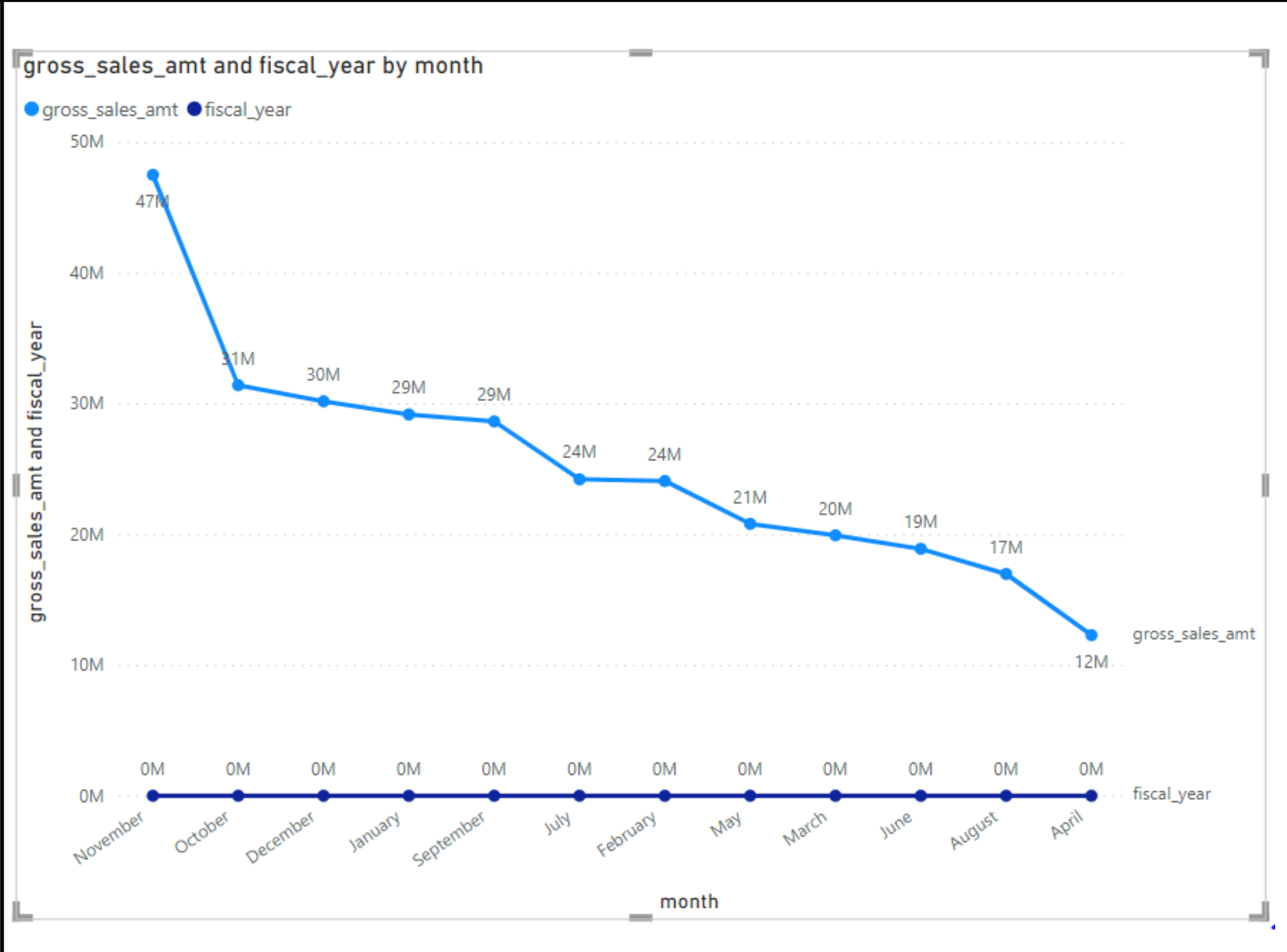
- "Flipkart" leads with an average pre-invoice discount of 30.83%, appealing strongly to savvy shoppers seeking savings.
- In contrast, "Amazon" maintains a competitive edge with a slightly lower average discount of 29.33%, reflecting a nuanced pricing strategy.
- "Viveks" also stands out for offering generous discounts, aligning with market trends favoring affordability.
- These varying discount strategies highlight opportunities to tailor approaches based on customer preferences and market dynamics, fostering strategic adjustments to enhance customer satisfaction and competitive positioning.

# Request-7

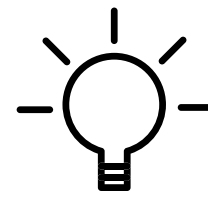
Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month. This analysis helps to get an idea of low and high-performing months and take strategic decisions. The final report contains these columns: Month Year Gross sales Amount

```
1 • select monthname(s.date) as month_,s.fiscal_year,
2 round(sum(g.gross_price*sold_quantity),2) as gross_sales_amt
3 from fact_sales_monthly s
4 join dim_customer c using(customer_code)
5 join fact_gross_price g using(product_code)
6 where customer="atliq exclusive"
7 group by month_,s.fiscal_year
8 order by fiscal_year_
```

month_	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







# INSIGHTS

- November 2021 recorded the highest gross sales amount, totaling \$32,247,289.79, highlighting its robust performance.
- Fiscal year 2021 began with lower sales in September but saw a significant spike in November, underscoring seasonal peaks.
- November consistently emerges as a powerhouse month, demonstrating a strong trend in sales performance year over year.
- Sales in March and April of fiscal year 2020 were comparatively lower but showed improvement in fiscal year 2021, indicating adaptive growth strategies.
- These insights offer strategic direction, suggesting a focus on peak sales months for marketing initiatives and proactive planning to address challenges during lower sales periods.

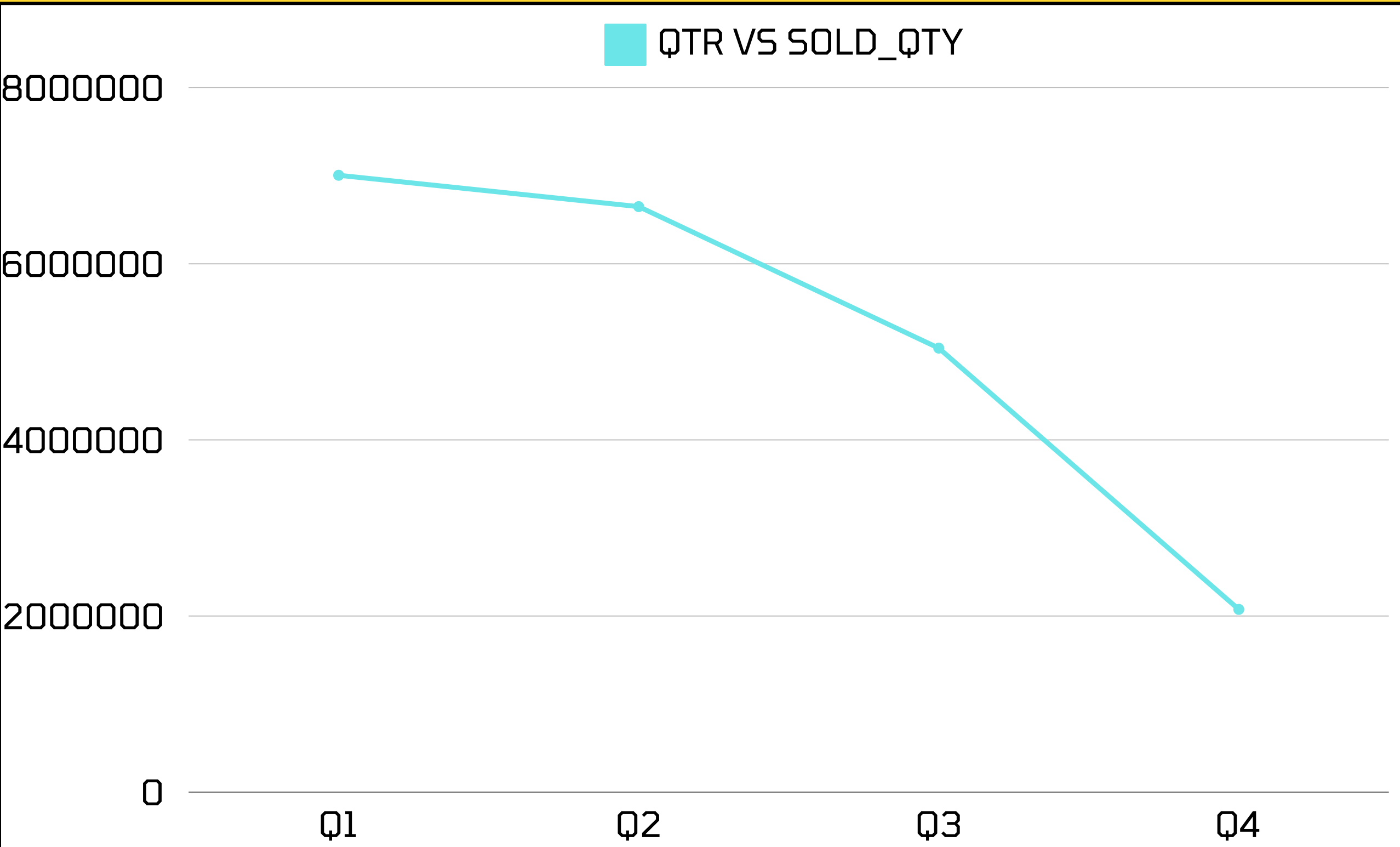
# Request-8

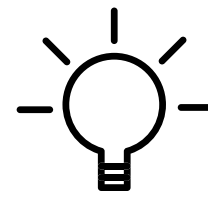
In which quarter of 2020, got the maximum total\_sold\_quantity? The final output contains these fields sorted by the total\_sold\_quantity, Quarter total\_sold\_quantity

```
1 • select
2   case
3     when month(date) in (9,10,11) then "Q1"
4     when month(date) in (12,1,2) then "Q2"
5     when month(date) in (3,4,5) then "Q3"
6     else "Q4"
7   end as quarters,
8   sum(sold_quantity) as total_sold_qty
9   from fact_sales_monthly
10  where fiscal_year=2020
11  group by quarters
12  order by total_sold_qty desc
```

Result Grid | Filter Rows:  | Export:

quarters	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087





# INSIGHTS

- Q1 leads with the highest total sold quantity of 7,005,619 units, marking a strong start to the year.
- Q2 follows closely, maintaining momentum in seasonal sales patterns.
- In contrast, Q3 shows lower sales activity, indicating a weaker period in the annual cycle.
- Understanding these seasonal variations guides strategic inventory management and targeted marketing efforts to capitalize on peak demand periods.

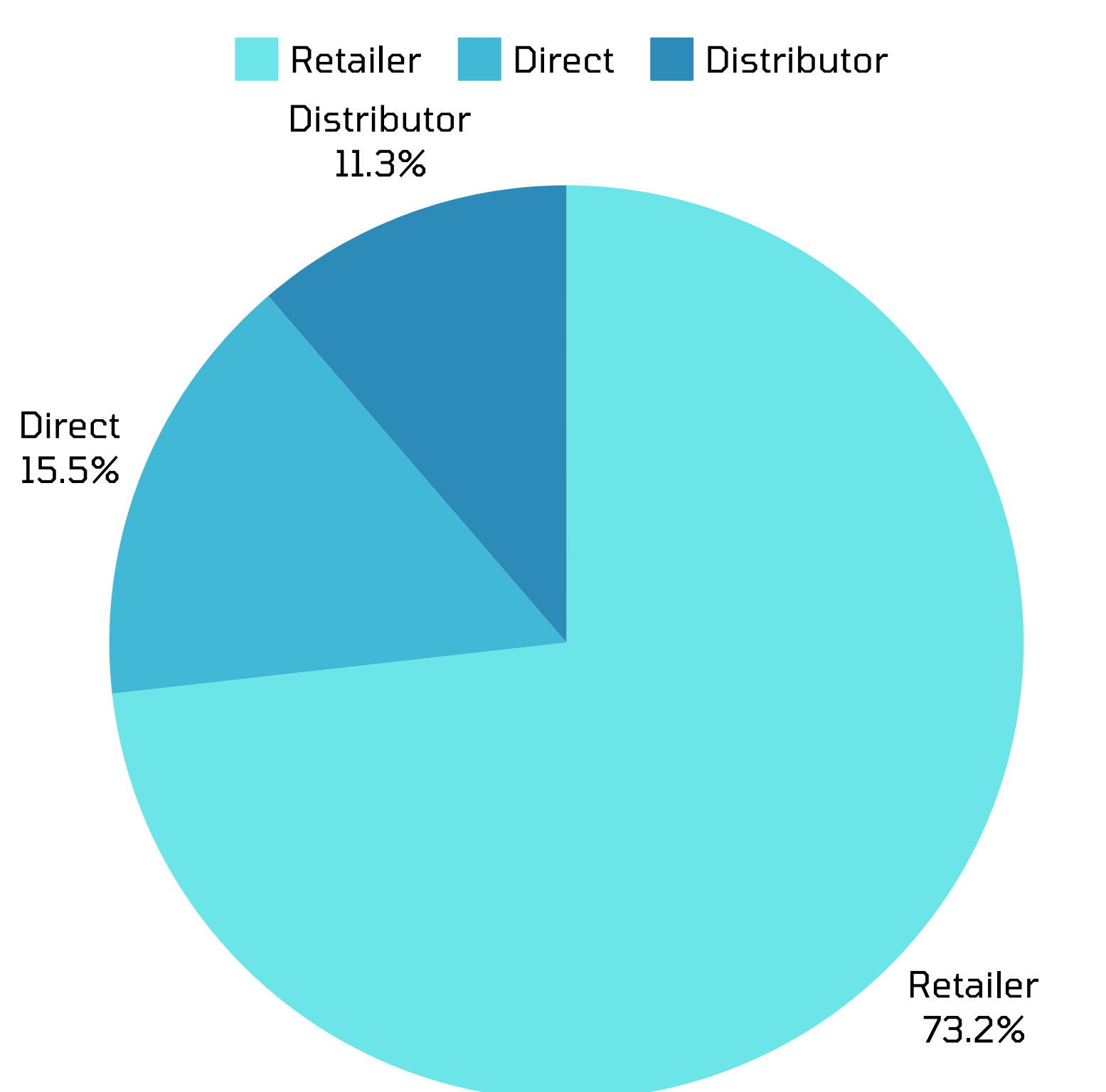
# Request-9

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

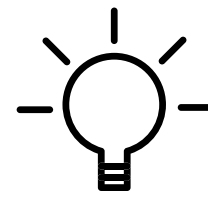
```
1 with x as(  
2   select c.channel,  
3   round(sum(g.gross_price*s.sold_quantity)/100000,2) as gross_sales_mln  
4   from fact_sales_monthly s  
5   join dim_customer c using(customer_code)  
6   join fact_gross_price g using (product_code)  
7   where s.fiscal_year=2021  
8   group by c.channel)  
9   select channel,gross_sales_mln,  
10  round((gross_sales_mln/(select sum(gross_sales_mln)from x))*100,2) as pct  
11  from x  
12  order by gross_sales_mln desc
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ☐

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







# INSIGHTS

- The "Retailer" channel dominates sales, comprising 73.22% of total gross sales, indicating its primary role as a revenue driver.
- The "Direct" channel also holds substantial importance, contributing 15.47% to overall gross sales.
- Contributions from the "Distributor" channel account for 11.31% of total gross sales.
- The prominence of the "Retailer" channel underscores its strategic significance within the sales portfolio.
- Opportunities for growth and diversification exist within the "Direct" and "Distributor" channels, offering potential avenues to expand market reach and optimize sales performance.

# 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

1

WITH x AS

2

(

3

SELECT P.division, S.product\_code, P.product, SUM(S.sold\_quantity) AS Total\_sold\_quantity,

4

RANK() OVER(PARTITION BY P.division ORDER BY SUM(S.sold\_quantity) DESC) AS 'Rank\_Order'

5

FROM dim\_product P JOIN fact\_sales\_monthly S

6

ON P.product\_code = S.product\_code

7

WHERE S.fiscal\_year = 2021

8

GROUP BY P.division, S.product\_code, P.product)

9

SELECT \* FROM x

10

WHERE Rank\_Order IN (1,2,3) ORDER BY division, Rank\_Order;

Result Grid

Filter Rows:

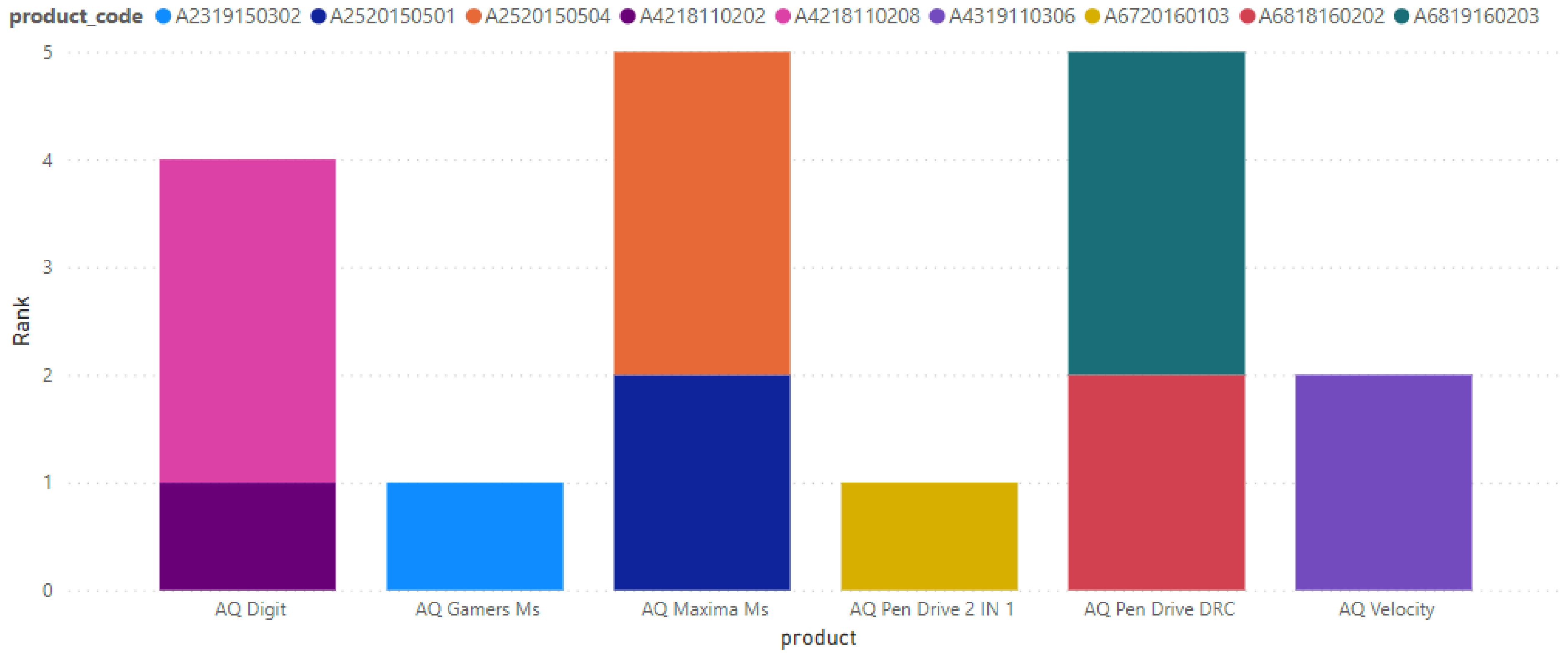
Export:

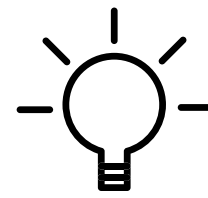
Wrap Cell Content:

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

# Request-10

## Visual

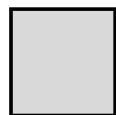




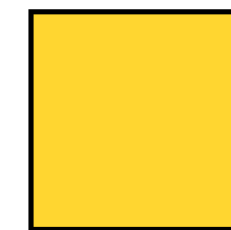
# INSIGHTS

- The top three products, "AQ Pen Drive 2 IN 1," "AQ Pen Drive DRC," and another variant of "AQ Pen Drive DRC," indicate a robust consumer preference for pen drives and related items within this division.
- The division excels with best-seller "AQ Gamers Ms" and two variants of "AQ Maxima Ms," catering specifically to gaming enthusiasts, necessitating efficient inventory management and ongoing promotion to sustain market success.
- The top-selling product in the "PC" division is "AQ Digit," alongside two variants, followed by "AQ Velocity," emphasizing the division's specialization in PC-related products and the critical importance of efficient inventory management and sustained branding efforts for continued success.





Thank you



**Presented by Gokul Das M**

