



CONSUMER GOODS AD-HOC INSIGHTS

**Presented By
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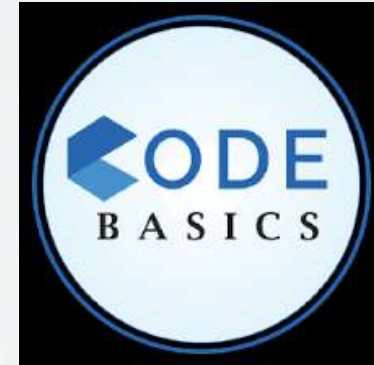


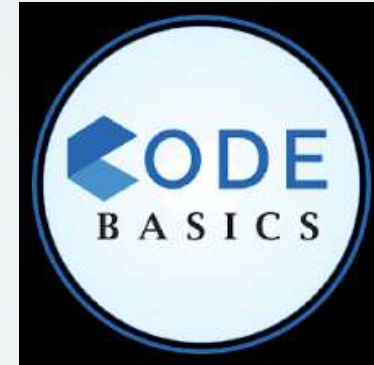
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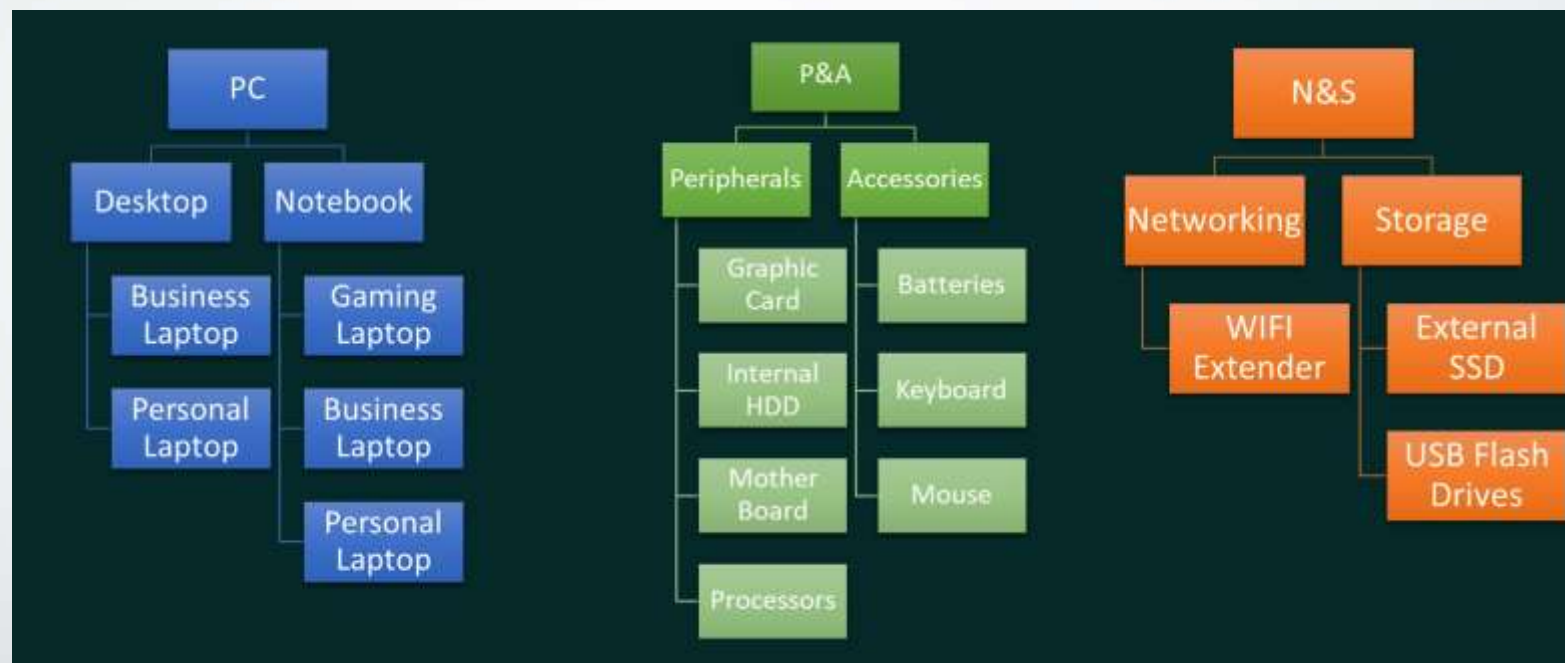


ABOUT AtliQ HARDWARE, BACKGROUND AND THE CONTEXT

- ★ About AtliQ Hardware : It is a top-tier computer hardware manufacturer in India with a strong international presence. We are dedicated to delivering innovative and reliable hardware solutions that drive technology forward globally.
 - ★ Background : The management has recognized a critical need : The lack of readily available, insightful data that facilitates quick and astute decision – making.
 - ★ Problem : The company requires insights for 10 ad hoc requests.
- Solution : Execute a SQL query to address these requests, visualize the findings, and present the insights to senior management.



AtliQ's PRODUCT LINES






AD-HOC REQUESTS

REQUESTS






Codebasics SQL Challenge

Requests:

1. Provide the list of markets in which customer "Atlix 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

codebasics.io



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 "Atlix 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_min
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

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AD - HOC REQUESTS, QUERIED RESULTS, INSIGHTS AND VISUALIZATIONS 



AD-HOC REQUEST 1 :

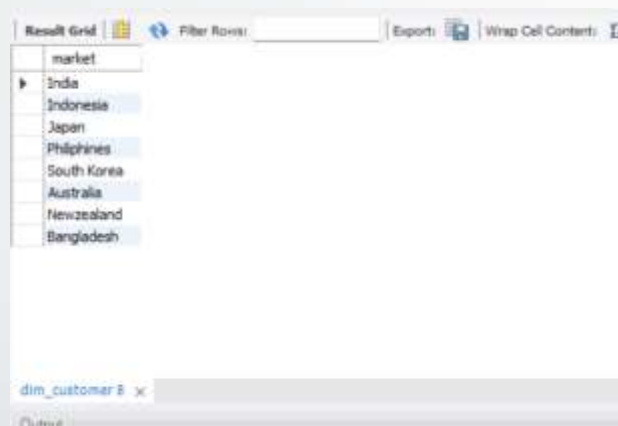
Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region

QUERY



```
3 • select distinct market
4   from dim_customer
5  where customer="Atliq Exclusive" and region = "APAC";
```

RESULT

A screenshot of a Business Intelligence (BI) tool interface. It shows a 'Result Grid' with a table containing a list of countries. The countries listed are India, Indonesia, Japan, Philippines, South Korea, Australia, New Zealand, and Bangladesh. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Contents' button. Below the table, there is a 'dim_customer B' field and an 'Output' section.

market
India
Indonesia
Japan
Philippines
South Korea
Australia
New Zealand
Bangladesh



INSIGHTS

- ★ AtliQ Exclusive operates across eight countries in the APAC region, showcasing a substantial presence in the regional market.



AD-HOC REQUEST 2 :

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

QUERY

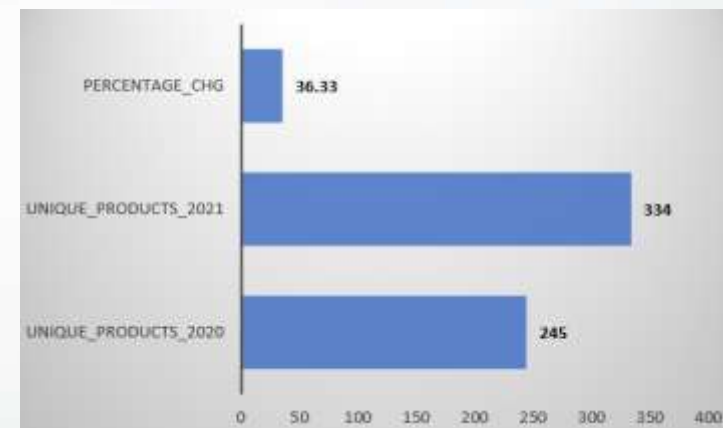
```
1 • with cte1 as
2   (select count(distinct product_code) as unique_products_2020
3    from fact_sales_monthly
4    where fiscal_year="2020"),
5   cte2 as
6   (select count(distinct product_code) as unique_products_2021
7    from fact_sales_monthly
8    where fiscal_year="2021")
9   select
10    unique_products_2020,unique_products_2021,
11    round((unique_products_2021-unique_products_2020)*100/unique_products_2020,2) as percentage_chg
12   from cte1,cte2;
```

RESULT

Result Grid			
	Filter Rows:	Export:	Wrap Cell Content:
	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33

Result 1 x

Output



INSIGHTS

- ★ **Product Growth** : The number of unique products expanded from 245 in 2020 to 334 in 2021, reflecting a 36.33% growth.
- ★ **Company Commitment** : This notable increase underscores the company's dedication to innovation and catering to diverse customer needs.



AD-HOC REQUEST 3 :

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

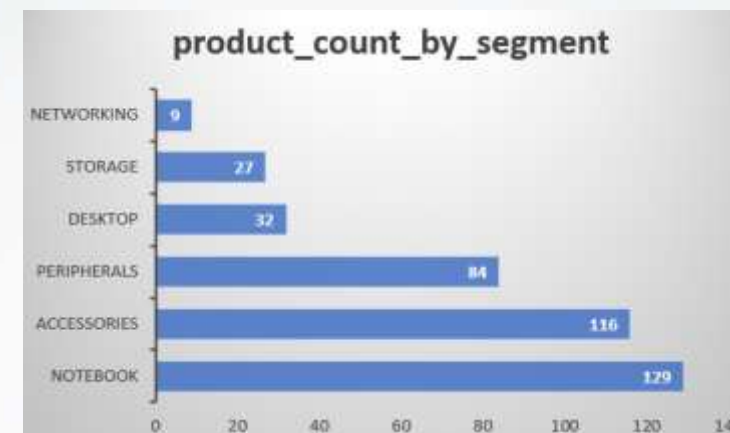
QUERY



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

RESULT

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
segment	product_count			
Notebook	129			
Accessories	116			
Peripherals	84			
Desktop	32			
Storage	27			
Networking	9			




INSIGHTS

- ★ **Notebook and Accessory Dominance** : Atliq excels in the notebooks, accessories, and peripherals segment, which constitutes an impressive 82.87% of its product range.
- ★ **Smaller Segments** : Desktops, storage, and networking collectively represent a modest 17.13% of Atliq's product portfolio.
- ★ **Strategic Focus Areas** : In the desktops, storage, and networking segments, Atliq should prioritize increasing product count while aligning with current customer trends and industry demands.

AD-HOC REQUEST 4 :

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

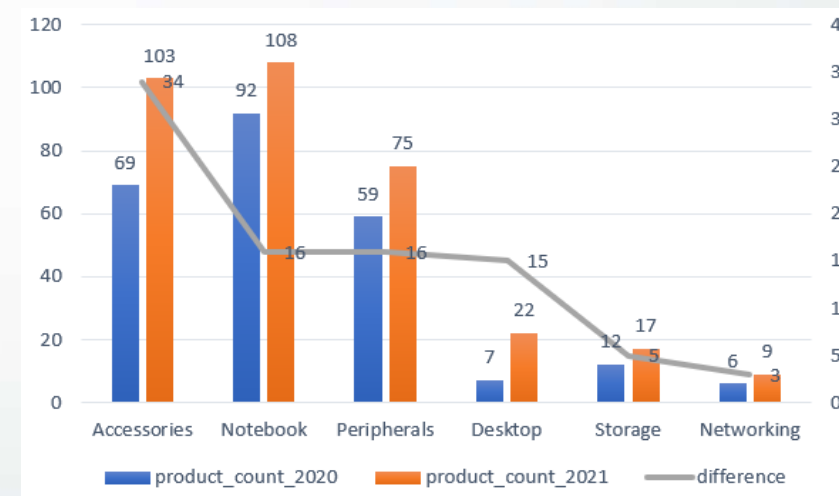
QUERY



```
1 • with unique_products as
2   (select segment,
3     count(distinct case when fiscal_year=2020 then a.product_code end) as product_count_2020,
4     count(distinct case when fiscal_year=2021 then a.product_code end) as product_count_2021
5   from dim_product a
6   join fact_gross_price b on a.product_code=b.product_code
7   group by segment)
8   select segment,product_count_2020,product_count_2021,(product_count_2021-product_count_2020)
9   as difference from unique_products group by segment order by difference desc;
```

RESULT

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

- ★ In 2021, Atliq Hardware prioritized expanding its presence in the accessories market, launching 34 new accessory products.



AD-HOC REQUEST 5 :

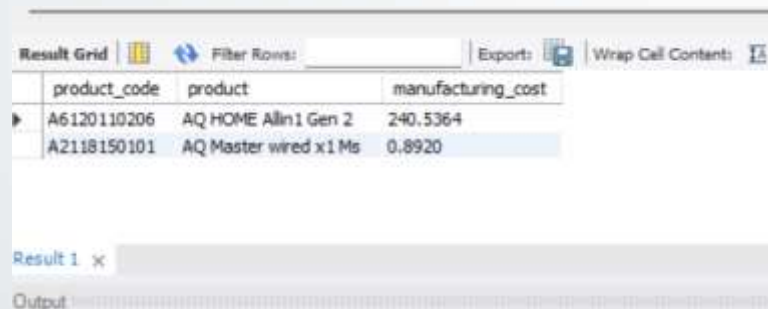
Get the products that have the highest and lowest manufacturing costs.

QUERY



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


RESULT



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 Allin1 Gen 2 (Personal Computer) = 240.54\$
- ★ Lowest manufacturing cost : AQ Master wired x 1 Ms (Mouse) = 0.89\$



AD-HOC 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 in the Indian market.

QUERY

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

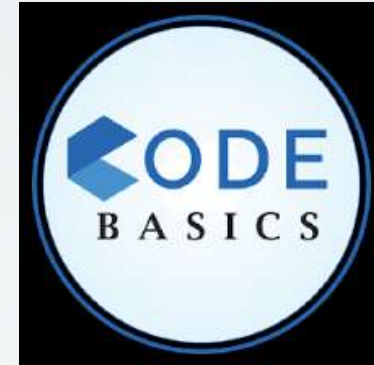
RESULT

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

- ★ In 2021, Flipkart enjoyed the highest pre - invoice discount in the Indian market at 30.83%. Reflecting this competitive stance, Atliq extended similar pre - invoice discount to its top five clients



AD-HOC REQUEST 7:

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

QUERY



```
1 • select concat(monthname(s.date), '(' ,year(s.date),')') as month, s.fiscal_year as year,  
2      concat(round(sum((g.gross_price*s.sold_quantity))/1000000,2),'M') as Gross_Sales_Amount  
3      from fact_gross_price g  
4      join fact_sales_monthly s  
5      using(product_code,fiscal_year)  
6      join dim_customer c  
7      using (customer_code)  
8      where c.customer="Atliq Exclusive"  
9      group by s.date, s.fiscal_year  
10     order by year;
```

RESULT



Result Grid			
	Filter Rows:	Export:	Wrap Cell Content:
month	year	Gross_Sales_Amount	
September(2019)	2020	4.50M	
October(2019)	2020	5.14M	
November(2019)	2020	7.52M	
December(2019)	2020	4.83M	
January(2020)	2020	4.74M	
February(2020)	2020	4.00M	
March(2020)	2020	0.38M	
April(2020)	2020	0.40M	
May(2020)	2020	0.78M	
June(2020)	2020	1.70M	
July(2020)	2020	2.55M	
August(2020)	2020	2.79M	
September(2020)	2021	12.35M	
October(2020)	2021	13.22M	


INSIGHTS

- ★ **Peak Sales** : AtliQ Exclusive achieved its highest sales in November 2020
- ★ **Lowest Sales** : March 2020 marked the lowest sales point
- ★ **Impact of COVID – 19** : The decrease in sales from March to August 2020 was linked to the repercussions of COVID -19.
- ★ **Recovery and Resilience** : Sales have steadily recovered post - pandemic, demonstrating resilience and surpassing the levels observed in 2020.

AD-HOC REQUEST 8:

In which quarter of 2020, got the maximum total_sold_quantity?

QUERY

A black curved arrow pointing from the word "QUERY" to the SQL code block.

```
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     when month(date) in (6,7,8) then "Q4"
7   end as Quarters, concat(round(sum(sold_quantity),2)) as Total_sold_quantity_mln
8   from fact_sales_monthly
9   where fiscal_year=2020
10  group by Quarters
11  order by Total_sold_quantity_mln desc;
```

RESULT

Quarters	Total_sold_quantity_mln
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087



INSIGHTS

- ★ **Third Quarter of FY 2020 :** During March, April, and May, characterized by COVID -19 peak and extensive lockdowns, sales sharply declined to 2.1 million units.
- ★ **Surge in Demand :** Interestingly, there was a notable surge in demand for computer accessories during this period, likely due to a large number of students beginning or continuing their coursework online.
- ★ **Impact on Rebound :** This increased demand possibly played a role in the early rebound observed in the fourth quarter.




AD-HOC REQUEST 9:

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

QUERY

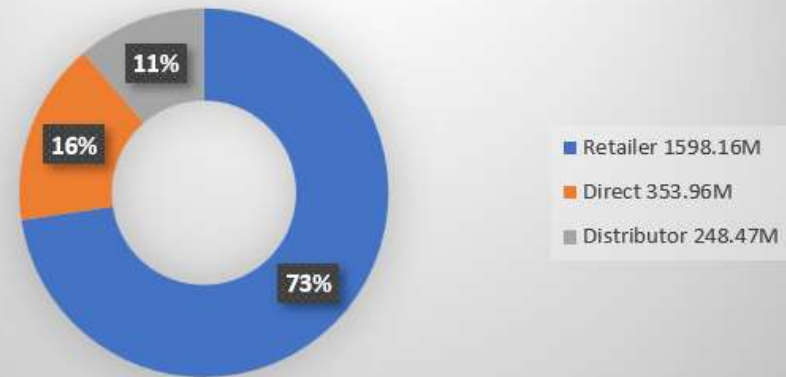
```
1 • with cte1 as
2   (select
3     c.channel,
4     round(sum((g.gross_price*s.sold_quantity))/1000000,2) as Gross_Sales_Mln
5   from fact_gross_price g
6   join fact_sales_monthly s using (product_code,fiscal_year)
7   join dim_customer c using (customer_code)
8   group by c.channel)
9
10  select channel, concat(Gross_Sales_Mln,'M') as Gross_Sales_Mln,
11    concat(round(((Gross_Sales_Mln)/(select sum(Gross_Sales_Mln) from cte1))*100,2),'%') as percentage_contribution
12  from cte1
13  order by percentage_contribution desc ;
```

RESULT



channel	Gross_Sales_Min	percentage_contribution
Retailer	1598.16M	72.62%
Direct	353.96M	16.08%
Distributor	248.47M	11.29%

percentage_contribution




INSIGHTS

- ★ **Retailer Sales Dominance** : The majority of AtliQ's overall sales, accounting for a significant 73 %, are conducted through retailers.
- ★ **Substantial Revenue Contribution** : Sales through retailers from a substantial portion of AtliQ's total revenue.
- ★ **Direct and Distributor Channels** : In contrast, sales through direct and distributor channels constitute a comparatively smaller share of the company's total revenue

AD-HOC REQUEST 10:

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

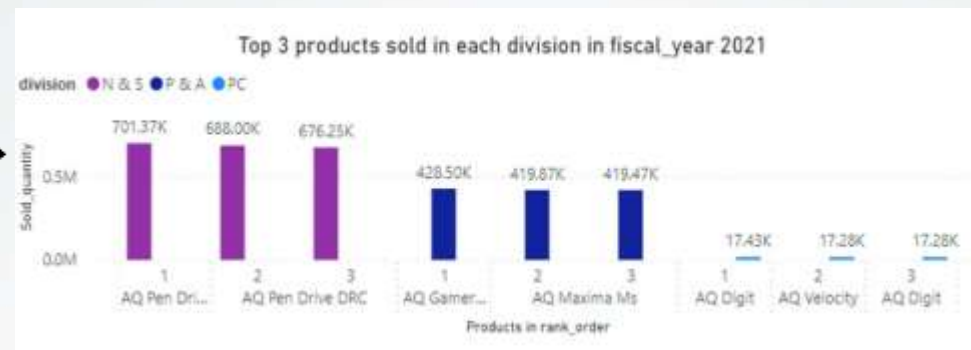
QUERY

A black curved arrow pointing from the word "QUERY" to the SQL code block.

```
1 • with cte1 as
2   (select p.division,s.product_code,p.product,sum(sold_quantity) as total_sold_quantity
3    from fact_sales_monthly s
4    join dim_product p
5    using (product_code)
6    where s.fiscal_year="2021"
7    group by p.division,s.product_code,p.product),
8   cte2 as
9   (select *, dense_rank() over(partition by division order by total_sold_quantity desc) as rank_order
10    from cte1)
11  select *
12  from cte2 where rank_order<=3
```

RESULT

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



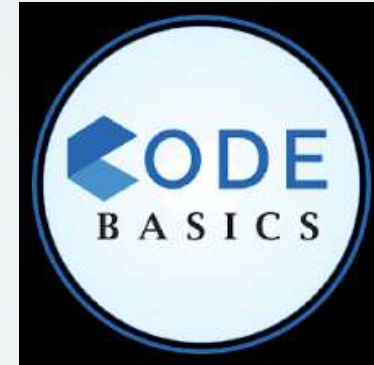
INSIGHTS

- ★ In the N & S division, the top three best – selling products were pen drives
- ★ In the P & A division, the leading products were pen mice.
- ★ Within the PC division, laptops emerged as the top three best – selling products.



KEY STRATEGIES TO ELEVATE AtliQ's SALES PERFORMANCE

- ★ **Deliver Exceptional Customer Service** : Prioritizing outstanding support to foster lasting relationships.
- ★ **Deploy a Comprehensive Marketing Strategy** : Utilize diverse channels to broaden audience reach.
- ★ **Cultivate a Distinctive Brand Identity** : Clearly communicate AtliQ's unique value proposition.
- ★ **Invest in Sales Team Training** : Enhance sales effectiveness through dedicated training.
- ★ **Offer Competitive Pricing and Promotions** : Provide attractive pricing and promotional offers.
- ★ **Expand and Refine Product Offerings** : Continuously improve and align products with market demands.
- ★ **Regularly Collect Customers Feedback** : Systematically gather feedback to drive continuous improvement.



THANK YOU FOR YOUR TIME AND ATTENTION