AtliQ Hardware

Sales Insights from Ad - Hoc Request

Agenda

Introduction

Company

AtliQ Hardwares is one of the leading computer hardware producers in India and well expanded in other countries too.

Context

The Management noticed that they do not get enough insights to make quick and smart data-informed decisions.

Problem Statement

There are 10 ad hoc requests for which the business needs insights.

Task

We need to solve the queries using SQL

Then, Convert those solved queries into visualisation and present insights to the Management.

Ad-hoc Queries

Q1. LIST OF MARKETS WHERE CUSTOMER "**ATLIQ EXCLUSIVE**" OPERATES BUSINESS IN "**ASIA PACIFIC**" REGION.

```
select distinct(market)
from dim_customer
where
customer = "Atliq Exclusive" and
region = "APAC";
```

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

India is a leading market for **Atliq Exclusive** in the **Asia Pacific (APAC)** region out of **8** countries, followed by **South Korea, Indonesia, Australia, the Philippines, Bangladesh, New Zealand,** and **Japan**.
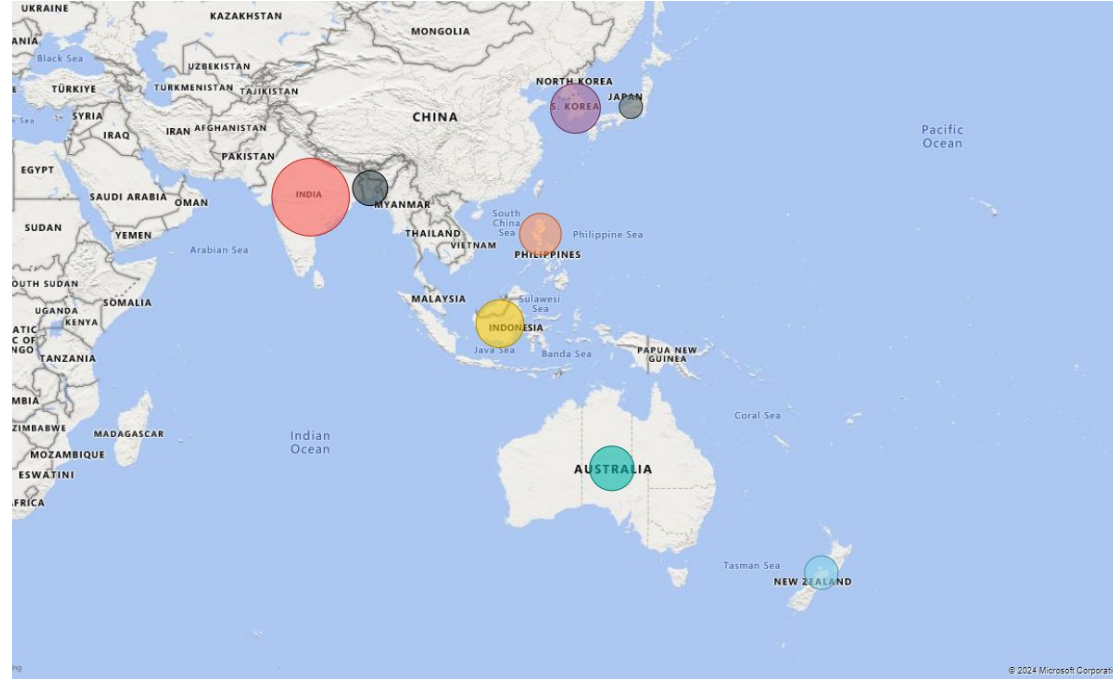
Q2. WHAT IS THE PERCENTAGE INCREASE IN UNIQUE PRODUCTS IN **2021** COMPARED TO **2020** ?

```
with unique_products_2020 as
(select
 count(distinct (product_code)) as unique_products_2020
from fact_sales_monthly
where fiscal_year = 2020),
unique_products_2021 as
(select
 count(distinct (product_code)) as unique_products_2021
from  fact_sales_monthly
where fiscal_year = 2021)

select up2020.unique_products_2020,
        up2021.unique_products_2021,
        round(((up2021.unique_products_2021 -
up2020.unique_products_2020) * 100 /
up2020.unique_products_2020),2) as percentage_chg
from unique_products_2020 up2020
cross join unique_products_2021 up2021;
```

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

The Number of unique products increased by 36.33% (from 245 to 334, an increase of 89) in 2021 compared to 2020.
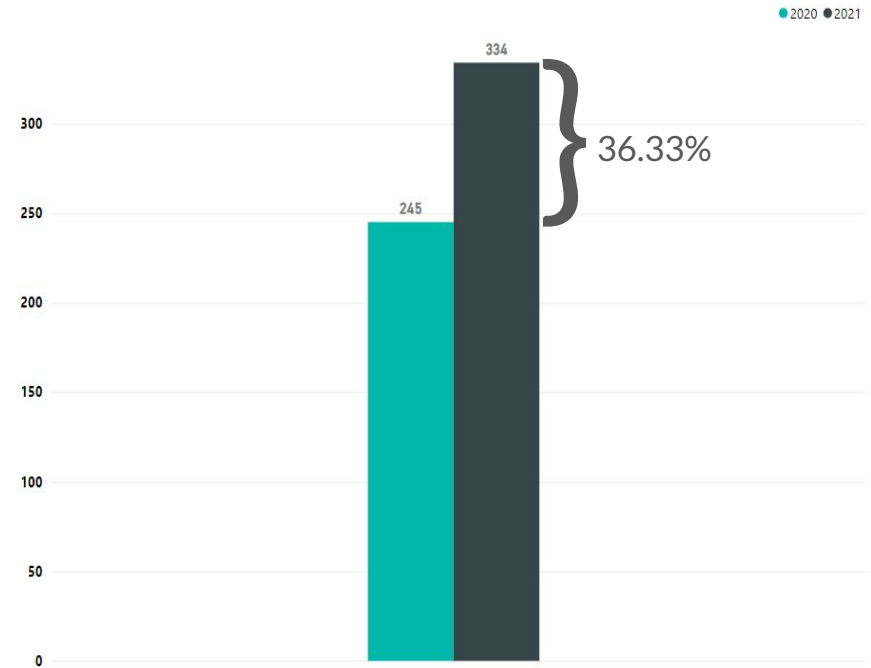
Q3. THE COUNT OF UNIQUE PRODUCTS FOR EACH **SEGMENT**, SORTED IN DESCENDING ORDER OF PRODUCT COUNTS.

```sql
select
segment, count(distinct(product_code)) as
product_count
from dim_product
group by segment
order by count(distinct(product_code)) desc;
```

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

The unique product counts for each segment, sorted in descending order, are as follows.
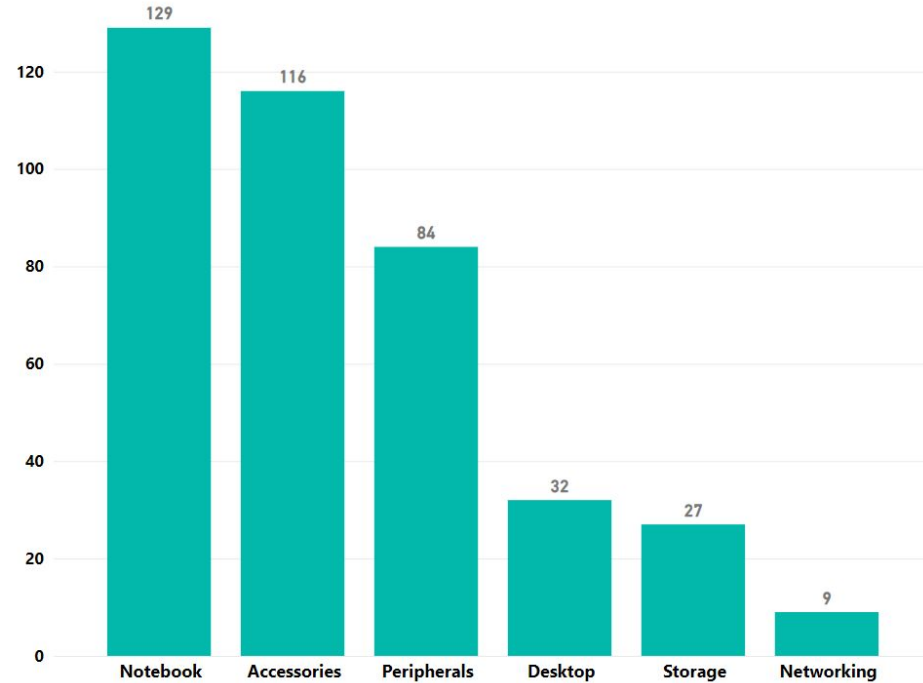
Q4. WHICH SEGMENT HAD THE LARGEST INCREASE IN UNIQUE PRODUCTS IN **2021** COMPARED TO **2020**?
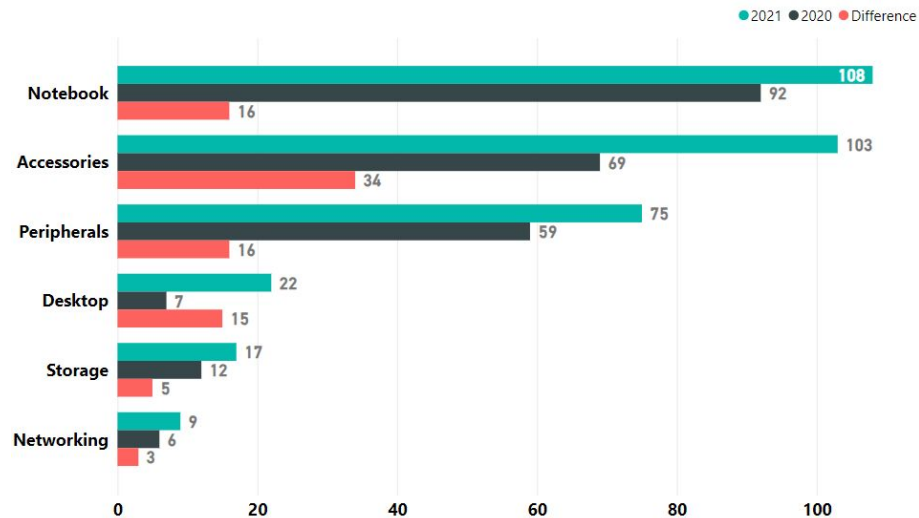
```
with f_2020 as
(select segment,
        product_code
from  dim_product
join fact_sales_monthly using (product_code)
where fiscal_year = 2020),
f_2021 as
(select  segment,
         product_code
from  dim_product
join fact_sales_monthly using (product_code)
where fiscal_year = 2021),
f_d_2020 as
(select  segment,
        count(distinct(product_code)) as product_count_2020
from f_2020
group by segment),
f_d_2021 as
(select segment,
        count(distinct(product_code)) as product_count_2021
FROM f_2021
group by segment)

select f_d_2020.segment,
        f_d_2020.product_count_2020,
        f_d_2021.product_count_2021,
        (f_d_2021.product_count_2021 -  f_d_2020.product_count_2020) as difference
from f_d_2020
join f_d_2021 using (segment)
order by difference desc;
```

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

For Atliq hardware, the **Accessories** segment experienced the highest increase in unique products in **2021** compared to **2020**.

Legend: 2021, 2020, Difference

Segment	2021	2020	Difference
Notebook	108	92	16
Accessories	103	69	34
Peripherals	75	59	16
Desktop	22	7	15
Storage	17	12	5
Networking	9	6	3

Q5. WHICH PRODUCTS HAVE THE **HIGHEST** AND **LOWEST** MANUFACTURING COST ?

```sql
select product_code,
        product,
        round(manufacturing_cost,2) as
manufacturing_cost
from fact_manufacturing_cost
join dim_product using (product_code)
where manufacturing_cost in
(select max(manufacturing_cost)
from fact_manufacturing_cost
union
select min(manufacturing_cost)
from fact_manufacturing_cost)
order by manufacturing_cost desc;
```

product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.54
A2118150101	AQ Master wired x1 Ms	0.89

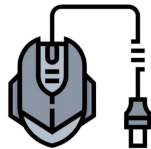| Product Code	Product	Manufacturing Cost
A6120110206	AQ HOME Allin1 Gen 2	240.54
A2118150101	AQ Master wired x1 Ms	0.89

A6120110206

$240.54

The product with the highest manufacturing cost is AQ HOME Allin1 Gen 2.

A2118150101

$0.89

The product with the lowest manufacturing cost is AQ Master wired x1 Ms.

Q6. LIST THE **TOP 5 CUSTOMERS** IN THE **INDIAN** MARKET WHO RECEIVED THE **HIGHEST AVERAGE PCT DISCOUNT** FOR THE FISCAL YEAR **2021**.

```sql
select d.customer_code,
       customer,
       round((pre_invoice_discount_pct)*100,2)
as average_discount_percentage
from
fact_pre_invoice_deductions f
join dim_customer d  using (customer_code)
where fiscal_year = 2021
and market = "India"
order by average_discount_percentage desc
limit 5;
```

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

Flipkart had the biggest average discount among Indian customers, at 30.83%.

Followed by others Viveks, Ezone, Croma, Amazon.

This discount strategy seems to to help Flipkart make the most sales.

Flipkart
30.83
Average % Discount

Viveks
30.38
Average % Discount

Ezone
30.28
Average % Discount

Croma
30.25
Average % Discount

Amazon
29.33
Average % Discount

Q7. GROSS SALES FOR CUSTOMER **"Atliq Exclusive"** FOR EACH MONTH.

```
select month(date) as month,
       year(date) as year,
       (round(sum(sold_quantity *
gross_price)/1000000,2)) as
gross_sales_amount
from fact_sales_monthly
join dim_customer using (customer_code)
join fact_gross_price using (product_code)
where customer = "Atliq Exclusive"
group by month, date
order by month asc, date asc;
```

month	year	gross_sales_amount
1	2020	9.58
1	2021	19.57
2	2020	8.08
2	2021	15.99
3	2020	0.77
3	2021	19.15
4	2020	0.80
4	2021	11.48
5	2020	1.59
5	2021	19.20
6	2020	3.43
6	2021	15.46
7	2020	5.15
7	2021	19.04
8	2020	5.64
8	2021	11.32
9	2019	9.09
9	2020	19.53
10	2019	10.38
10	2020	21.02
11	2019	15.23
11	2020	32.25
12	2019	9.76
12	2020	20.41

This report shows how much money Atliq Exclusive made each month.

It helps figure out which months were good and which ones were not so good for sales, so we can make better plans.
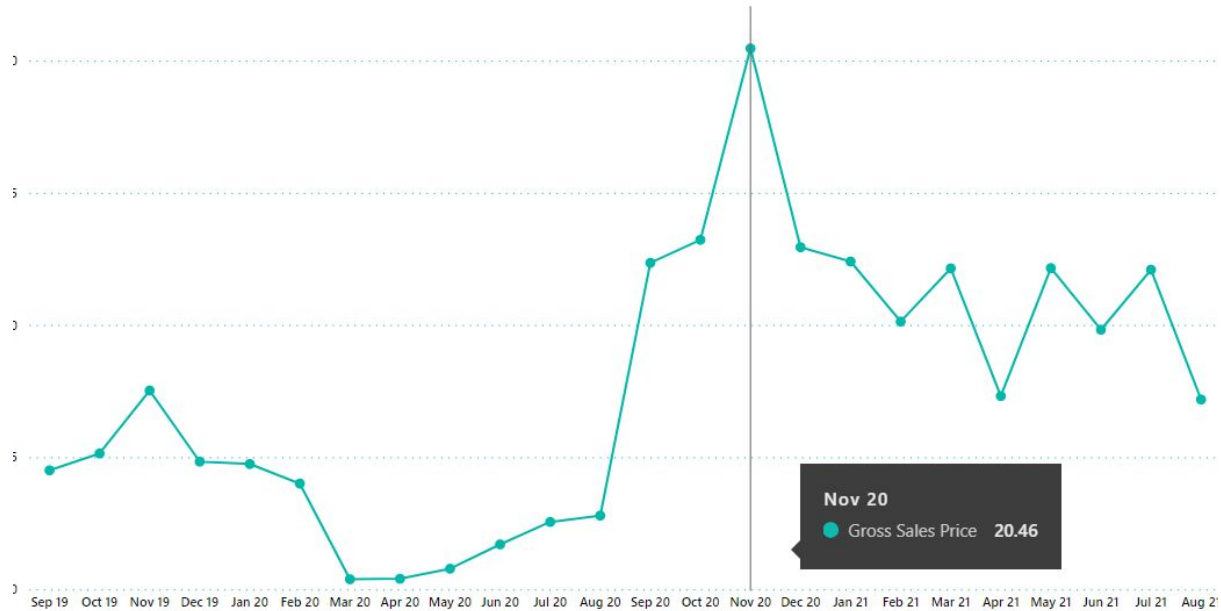
At the beginning of the fiscal year, Atliq Exclusive recorded average sales.

However, in the month of March, Atliq Exclusive experienced its lowest sales, likely due to the Covid-19 pandemic.

Mar 20
● Gross Sales Price   0.38

In fiscal year 2021, Atliq Exclusive experienced its highest sales in the month of November.

| | Sep 19 | Oct 19 | Nov 19 | Dec 19 | Jan 20 | Feb 20 | Mar 20 | Apr 20 | May 20 | Jun 20 | Jul 20 | Aug 20 | Sep 20 | Oct 20 | Nov 20 | Dec 20 | Jan 21 | Feb 21 | Mar 21 | Apr 21 | May 21 | Jun 21 | Jul 21 | Aug 2 |

Nov 20
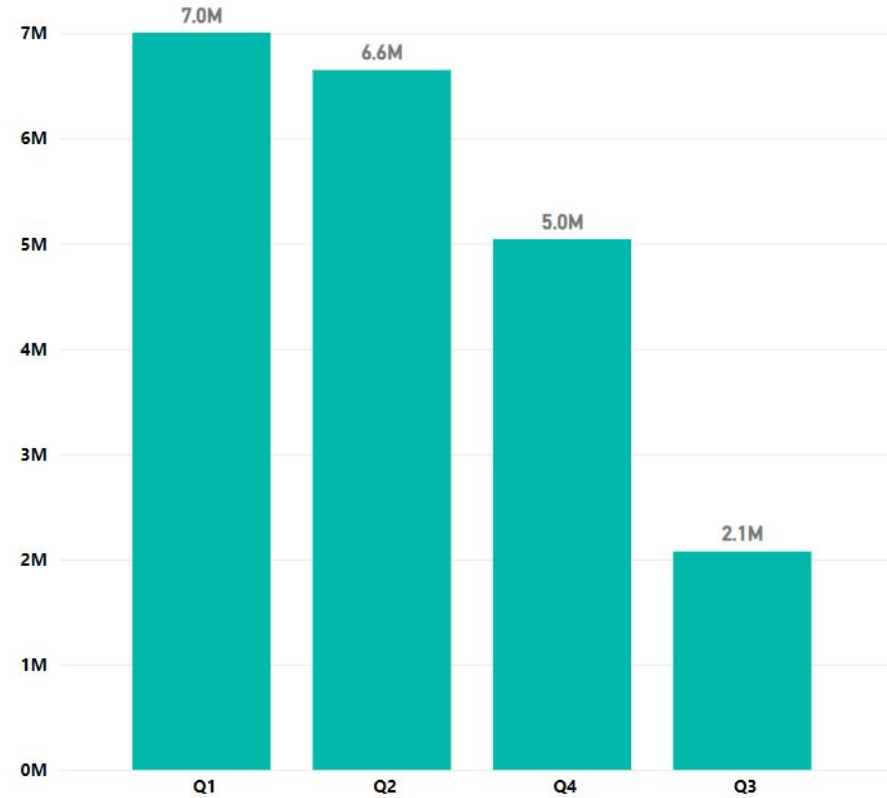● Gross Sales Price   **20.46**

Q8. WHICH QUARTER OF **2020** HAD THE **MAXIMUM** TOTAL SOLD QUANTITY ?

```sql
with quarters as(
      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'
      when month(date) in (6, 7, 8) then 'Q4'
      end as Quarter
      from fact_sales_monthly
   where fiscal_year = 2020
)
select Quarter,
        sum(sold_quantity) as total_sold_quantity
from quarters
group by Quarter
order by total_sold_quantity desc;
```

Quarter	total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

In fiscal year **2020**, the maximum total sold quantity was in **Q1**, with a total of **7.05 million** units, while the least was in **Q3**, with a total of **2.08 million** units.

Q9. WHICH CHANNEL GENERATED THE **HIGHEST GROSS SALES** IN THE FISCAL YEAR **2021**, AND WHAT WAS ITS PERCENTAGE CONTRIBUTION?

```sql
with channel_gross as(
        select
            dim_customer.channel,
            round(sum(gross_price*sold_quantity)/1000000,2)
as gross_sales_mln
        from fact_sales_monthly
    join dim_customer using (customer_code)
    join fact_gross_price using (product_code)
    where fact_sales_monthly.fiscal_year = 2021
    group by dim_customer.channel
    order by gross_sales_mln desc
)
select
        channel,
        gross_sales_mln,
        round((gross_sales_mln/sum(gross_sales_mln)
over()*100),2) as percentage
from channel_gross;
```

channel	gross_sales_mln	percentage
Retailer	1924.17	73.22
Direct	406.69	15.48
Distributor	297.18	11.31

In fiscal year 2021, the Retailer channel was the most successful for Atliq Hardware, contributing 73.22% of the total gross sales.

The Distributor channel had the lowest contribution, accounting for only 11.31% of the total sales.

The Direct Channel contributed 15.48% to the total gross sales.

Channel ● Retailer ● Direct ● Distributor

11.31

15.48

73.22
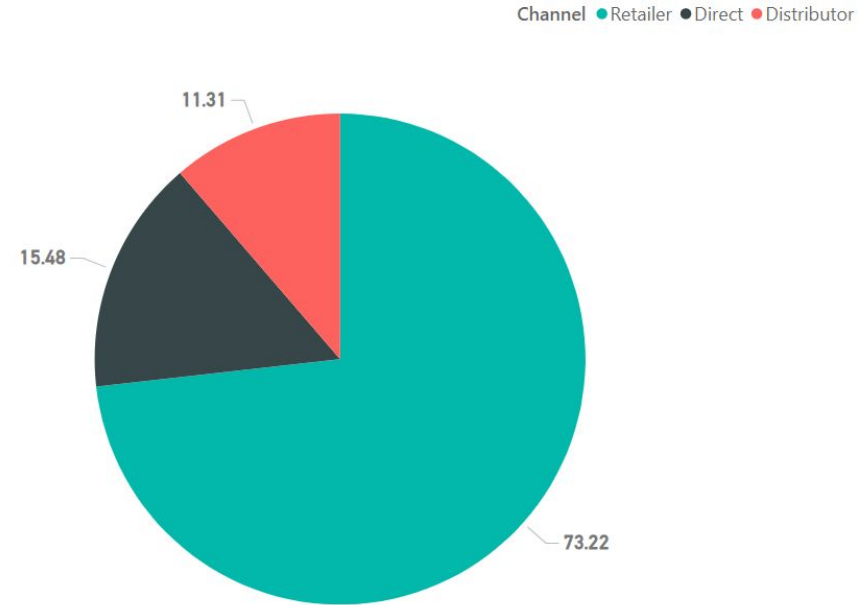
Q10. **TOP 3 PRODUCTS** IN EACH DIVISION WITH HIGHEST QUANTITY SOLD IN FISCAL YEAR **2021**

```sql
with division_sales as(
        select
                dp.division,
                fsm.product_code,
                dp.product,
                sum(fsm.sold_quantity) as total_sold_quantity,
                rank() over(partition by dp.division order by
sum(sold_quantity) desc) as rank_order
        from fact_sales_monthly fsm
    join dim_product dp using (product_code)
    where fiscal_year = 2021
    group by dp.division, fsm.product_code, dp.product
)
select
        division_sales.product_code,
    division_sales.product,
    division_sales.division,
    division_sales.total_sold_quantity,
    division_sales.rank_order
from division_sales
where division_sales.rank_order <= 3;
```

product_code	product	division	total_sold_quantity	rank_order
A6720160103	AQ Pen Drive 2 IN 1	N & S	701373	1
A6818160202	AQ Pen Drive DRC	N & S	688003	2
A6819160203	AQ Pen Drive DRC	N & S	676245	3
A2319150302	AQ Gamers Ms	P & A	428498	1
A2520150501	AQ Maxima Ms	P & A	419865	2
A2520150504	AQ Maxima Ms	P & A	419471	3
A4218110202	AQ Digit	PC	17434	1
A4319110306	AQ Velocity	PC	17280	2
A4218110208	AQ Digit	PC	17275	3

In fiscal year **2021**, the **Top 3 Products** with the highest total sold quantities in each division are as follows:

Network & Storage Division:

1. AQ Pen Drive 2 IN 1 with a total sold quantity of 701,373 units
2. AQ Pen Drive DRC with 688,003 units
3. AQ Pen Drive DRC with 676,245 units

Peripheral & Accessories Division:

1. AQ Gamers Ms with a total sold quantity of 701,373 units
2. AQ Maxima Ms with 419,865 units
3. AQ Maxima Ms with 419,471 units

PC Division:

1. AQ Digit with a total sold quantity of 17,434 units
2. AQ Velocity with 17,280 units
3. AQ Digit with 17,275 units

Product Code	Product	Division	Rank Order	Total Sold Quantity
A6720160103	AQ Pen Drive 2 IN 1	N & S	1	7,01,373
A6818160202	AQ Pen Drive DRC	N & S	2	6,88,003
A6819160203	AQ Pen Drive DRC	N & S	3	6,76,245
A2319150302	AQ Gamers Ms	P & A	1	4,28,498
A2520150501	AQ Maxima Ms	P & A	2	4,19,865
A2520150504	AQ Maxima Ms	P & A	3	4,19,471
A4218110202	AQ Digit	PC	1	17,434
A4218110208	AQ Digit	PC	3	17,275
A4319110306	AQ Velocity	PC	2	17,280

Conclusion

In reviewing AtliQ Hardware Company's data, we've discovered key insights:

- AtliQ Exclusive is thriving in the Asia Pacific region, particularly in India, South Korea, and Indonesia, indicating promising growth opportunities.
- Their diverse product range has seen a significant 36.33% increase from 2020 to 2021, primarily in accessories, showcasing adaptability to customer demands.
- Strategic discounts, especially with top clients like Flipkart, are driving sales in India.
- Retailer partnerships yield the most revenue, highlighting the importance of strengthening these alliances.
- Top-selling items, such as AQ Pen Drive 2 IN 1 and AQ Gamers Ms, demonstrate alignment with customer preferences.

To grow and stay competitive, AtliQ should work closely with retailers and make more accessory products. This will help them build on what they're good at and find new chances to succeed in the hardware market.

Thank You !