ATLIQ HARDWARE

This presentation contains the analysis for the business questions asked by the management to the technical team in order to understand the areas of improvement in business.

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

```sql
select distinct market
from dim_customer
where customer='Atliq Exclusive' and region='APAC';
```

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Markets in APAC region for customer "Atliq Exclusive"

market
- Australia
- Bangladesh
- India
- Indonesia
- Japan
- Newzealand
- Philiphines
- South Korea

For customer Atliq Exclusive, it operates in 8 markets in the APAC region.

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

```sql
with up_2020 as (
select count(distinct fs.product_code) as unique_products_2020
from fact_sales_monthly fs
where fiscal_year=2020),

up_2021 as (
select count(distinct fs.product_code) as unique_products_2021
from fact_sales_monthly fs
where fiscal_year=2021)

select unique_products_2020,unique_products_2021,
round(((unique_products_2021-unique_products_2020)/unique_products_2020)*100,2) as percentage_chg
from up_2020
cross join up_2021;
```

	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33

Percentage of unique product increase in 2021 vs. 2020

36.33
Product % Increase 2021 vs 2020

Compared to 2020, there has been 36.33 % increase in the number of unique products in 2021.

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;
```

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

**Count of distinct product_code by segment**
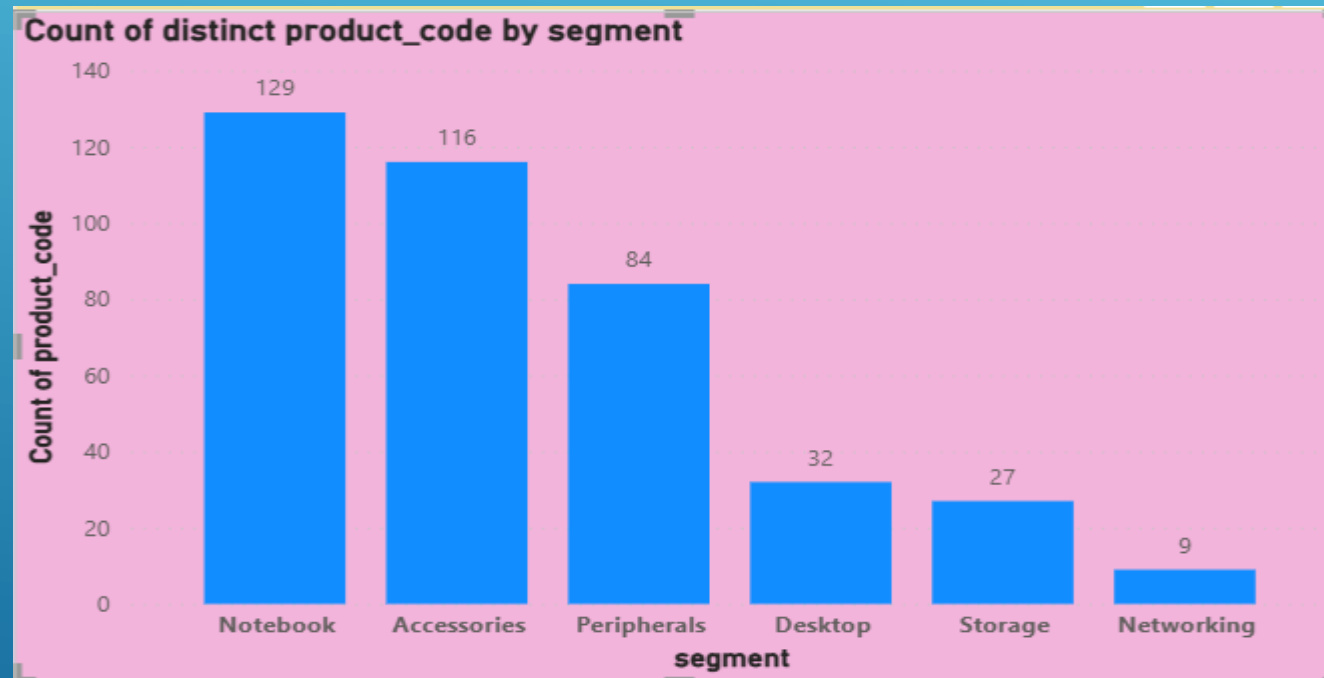
There are 6 segments, out of which maximum products are for Notebook and minimum products are for Networking.

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

```
with seg_pro_2020 as (
select segment,count(distinct fs.product_code) as product_count_2020
from dim_product p
inner join fact_sales_monthly fs
on p.product_code=fs.product_code
where fiscal_year=2020
group by segment),

seg_pro_2021 as (
select segment,count(distinct fs.product_code) as product_count_2021
from dim_product p
inner join fact_sales_monthly fs
on p.product_code=fs.product_code
where fiscal_year=2021
group by segment)

select seg_pro_2020.segment,product_count_2020,product_count_2021,
product_count_2021 - product_count_2020 as difference
from seg_pro_2020
inner join seg_pro_2021
on seg_pro_2020.segment=seg_pro_2021.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

Segment had the most increase in unique products in 2021 vs 2020
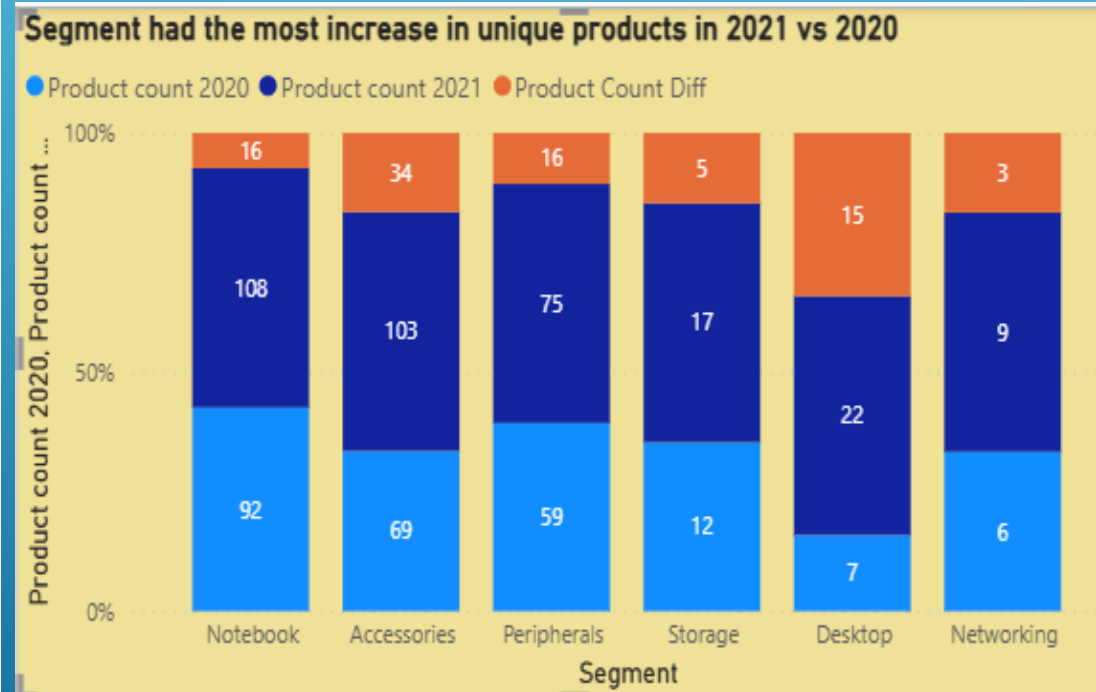
Accessories segment has the most product increase in 2021 compared to 2020

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

```sql
select p.product_code, concat(p.product,' ',p.variant) as 'product', manufacturing_cost from
dim_product p
inner join
fact_manufacturing_cost fm
on p.product_code=fm.product_code
where fm.manufacturing_cost=(select min(manufacturing_cost) from fact_manufacturing_cost)
or fm.manufacturing_cost=(select max(manufacturing_cost) from fact_manufacturing_cost);
```

product_code	product	manufacturing_cost
▶ A2118150101	AQ Master wired x1 Ms Standard 1	0.8920
A6120110206	AQ HOME Allin1 Gen 2 Plus 3	240.5364

product_code	product_code
A2118150101	A6120110206
Product	**Product**
AQ Master wired x1 Ms Standard 1	AQ HOME Allin1 Gen 2 Plus 3
Manufacturing cost	**Manufacturing cost**
0.89	240.54

The product codes A2118150101 and A6120110206 having the minimum and maximum manufacturing costs respectively.

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.

```sql
select c.customer_code,c.customer,round(avg(pre_invoice_discount_pct)*100,2) as average_discount_percentage
from dim_customer c
inner join fact_pre_invoice_deductions fp
on c.customer_code=fp.customer_code
where fp.fiscal_year=2021 and c.market='India'
group by c.customer_code,c.customer
order by 3 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

Avg Pre-Invoice Discount % by customer for India market and fiscal year 2021
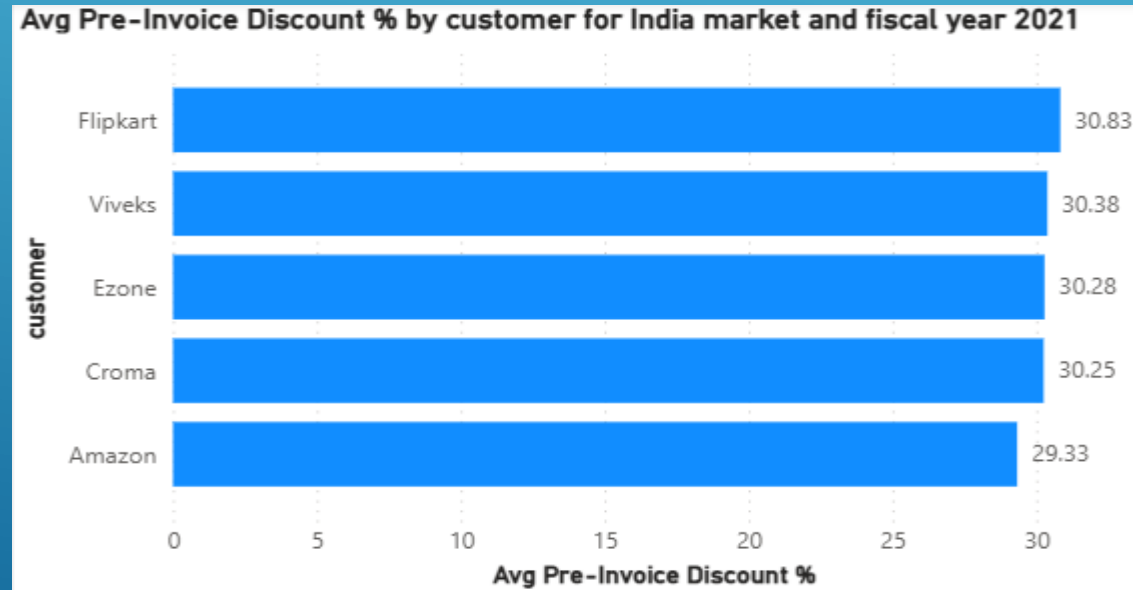
In Indian market, for fiscal year 2021, above 5 customers had received high discounts.

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

```sql
select monthname(fs.date) 'Month',year(fs.date) 'Year',concat(round(sum(gross_price*sold_quantity)/1000000,2),' ','Millions')
as 'Gross sales Amount'
from dim_customer c
inner join fact_sales_monthly fs
on c.customer_code=fs.customer_code
inner join fact_gross_price fg
on fs.product_code=fg.product_code
where c.customer='Atliq Exclusive'
group by year(fs.date),monthname(fs.date);
```

Month	Year	Gross sales Amount
September	2019	9.09 Millions
October	2019	10.38 Millions
November	2019	15.23 Millions
December	2019	9.76 Millions
January	2020	9.58 Millions
February	2020	8.08 Millions
March	2020	0.77 Millions
April	2020	0.80 Millions

Gross Sales Amount by Year and Month

Sales were down in the first half of 2020 due to COVID but picked up later the same year, the sales were much better in 2021.

8. In which quarter of 2020, got the maximum total_sold_quantity?

```sql
select case when month(date) in (9,10,11) then 1
            when month(date) in (12,1,2) then 2
            when month(date) in (3,4,5) then 3
            else 4
       end as 'Quarter',
       sum(sold_quantity) as total_sold_quantity
from fact_sales_monthly
where fiscal_year=2020
group by
case when month(date) in (9,10,11) then 1
            when month(date) in (12,1,2) then 2
            when month(date) in (3,4,5) then 3
            else 4
       end
order by 2 desc;
```

Quarter	total_sold_quantity
1	7005619
2	6649642
4	5042541
3	2075087

As fiscal year of Atliq starts from September instead of April, we have to do the quarter calculation respectively, we can conclude that the first quarter(September, November, December) has the most quantity of items sold whereas third quarter(March, April, May) has the least quantity of items sold.

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

```sql
with channel_sales as (
select channel,concat(round(sum(gross_price*sold_quantity)/1000000,2),' ','Millions') as gross_sales_mln
from dim_customer c
inner join fact_sales_monthly fs
on c.customer_code=fs.customer_code
inner join fact_gross_price fg
on fs.product_code=fg.product_code
and fs.fiscal_year=fg.fiscal_year
where fs.fiscal_year=2021
group by channel
order by 2 desc),

totalgrosssales as (
select sum(gross_sales_mln) as totsum
from channel_sales)

select channel, gross_sales_mln, round((gross_sales_mln/totsum)*100,2) as percentage
from channel_sales cs
cross join totalgrosssales tgs
order by round((gross_sales_mln/totsum)*100,2) desc;
```

channel	gross_sales_mln	percentage
Retailer	1219.08 Millions	73.23
Direct	257.53 Millions	15.47
Distributor	188.03 Millions	11.3

In fiscal year 2021, Retailer channel has the most gross sales, around 73.23 %.

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

```sql
create temporary table temp as (
select division,p.product_code,concat(p.product,' ',p.variant) as 'product',
sum(sold_quantity) as total_sold_quantity
from dim_product p
inner join fact_sales_monthly fs
on p.product_code=fs.product_code
where fiscal_year=2021
group by division,p.product_code,concat(p.product,' ',p.variant));

with cte as (
select *,rank() over(partition by division order by total_sold_quantity desc) as rank_order
from temp)

select * from cte where rank_order between 1 and 3;
```

division	product_code	product	total_sold_quantity	rank_order
N & S	A6720160103	AQ Pen Drive 2 IN 1 Premium	701373	1
N & S	N & S 8160202	AQ Pen Drive DRC Plus	688003	2
N & S	A6819160203	AQ Pen Drive DRC Premium	676245	3
P & A	A2319150302	AQ Gamers Ms Standard 2	428498	1
P & A	A2520150501	AQ Maxima Ms Standard 1	419865	2
P & A	A2520150504	AQ Maxima Ms Plus 2	419471	3
PC	A4218110202	AQ Digit Standard Blue	17434	1
PC	A4319110306	AQ Velocity Plus Red	17280	2
PC	A4218110208	AQ Digit Premium Misty Green	17275	3

In fiscal year 2021, the product AQ Pen Drive 2 IN 1 Premium has been sold the most, 701373 times.