Consumer Goods Ad_Hoc Insights Of Atliq Hardware

#RESUMECHALLENGE

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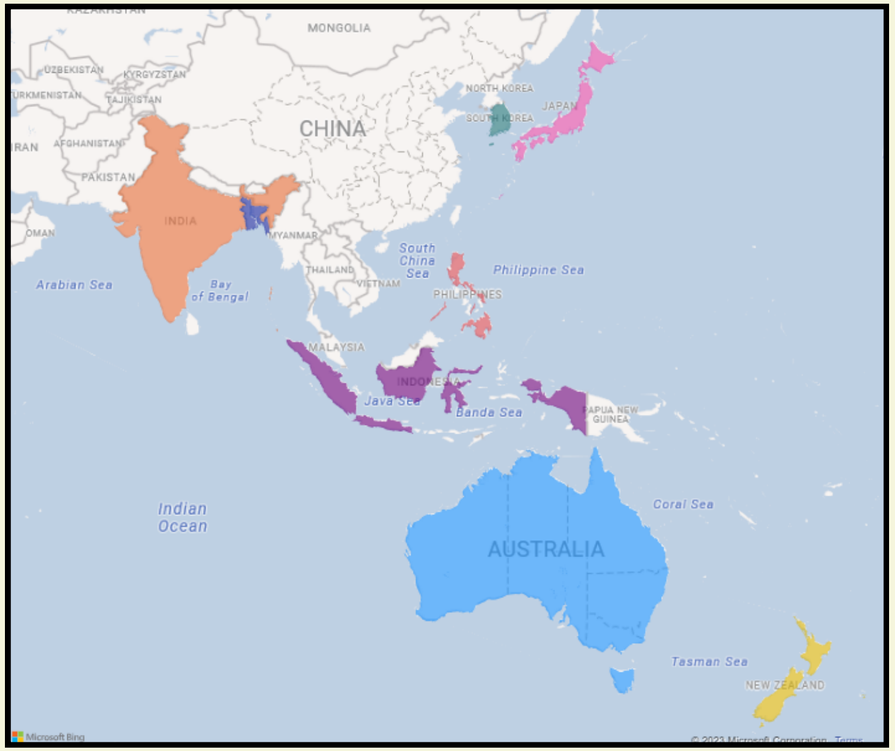
Atliq Hardware is a prominent computer hardware manufacturer based in India, holding a leading position not only in India but also in other countries as well.

This project is about utilizing SQL to extract valuable insights and to address critical business questions rised by Atliq Hardware.
Through this project, I gained hands-on experience in data analysis, database management, and solving real-world business challenges, reinforcing the significance of data-driven approaches in today's business landscape

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

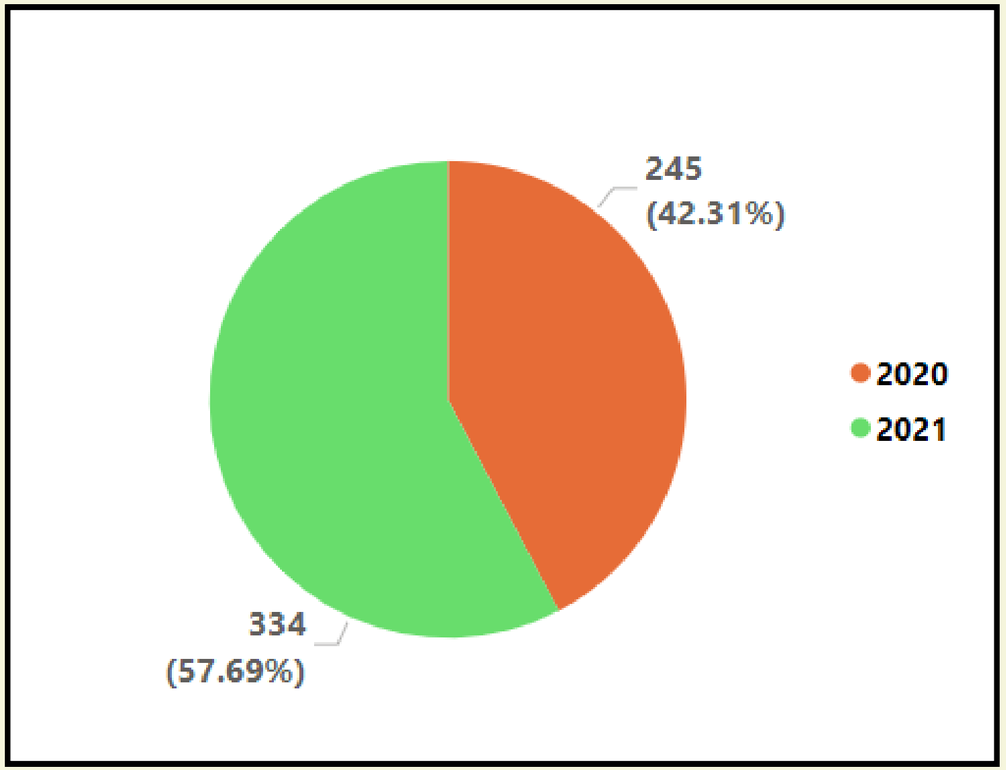


market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Query used

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

The percentage of unique product increase in 2021 vs. 2020

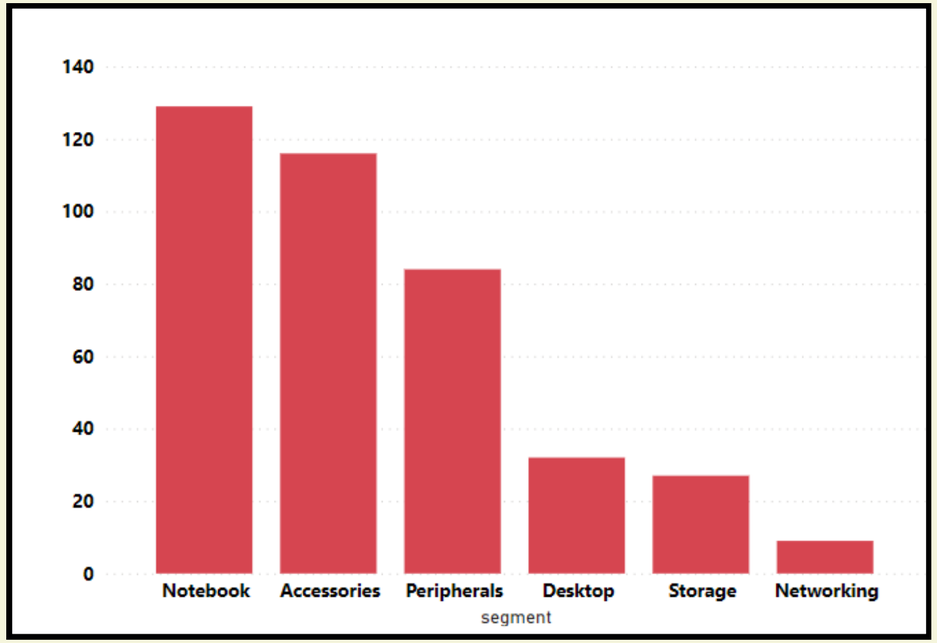


unique_products_2020	unique_products_2021	percentage_change
245	334	36.33

Query used

```
with cte_20 as
(select count(1) from fact_gross_price
where fiscal_year = '2020'),
cte_21 as
(select count(1) from fact_gross_price
where fiscal_year = '2021')
select (select * from cte_20) as unique_products_2020,
(select * from cte_21) as unique_products_2021,
round(
((select * from cte_21) -
(select * from cte_20))*100/(select * from cte_20) , 2
)
as percentage_change
from fact_gross_price
group by (select * from cte_20), (select * from cte_21)
```

The unique product counts for each segment

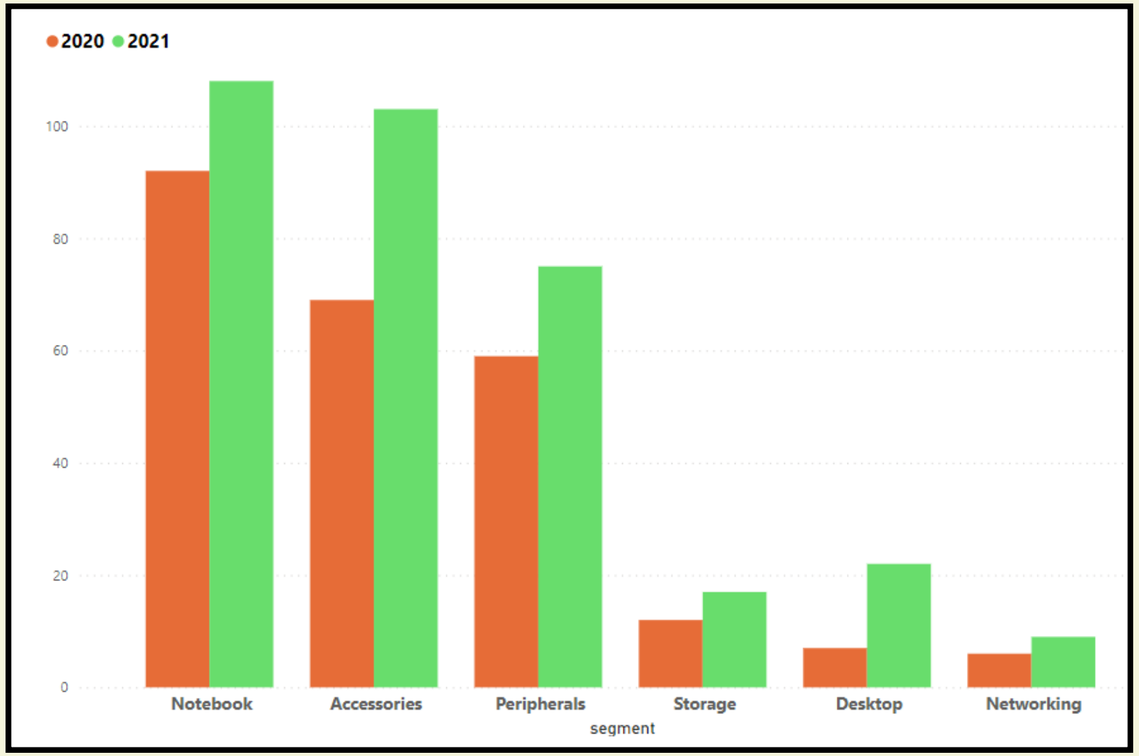


segment	product_count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9

Query used

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

Segment which had the most increase in unique products in 2021 vs 2020



segment	product_count_2020	product_count_2021	difference
Peripherals	59	75	16
Accessories	69	103	34
Notebook	92	108	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

Query used

```sql
with outside as
(select p.product_code,
p.segment, f.fiscal_year
from dim_product p
left join fact_gross_price f
on p.product_code = f.product_code),

product_count_2020 as
(select segment,
count(product_code) as product_count_2020
from outside
where fiscal_year = '2020'
group by segment),

product_count_2021 as
(select segment,
count(product_code) as product_count_2021
from outside
where fiscal_year = '2021'
group by segment)

select s.segment,
s.product_count_2020 as product_count_2020,
q.product_count_2021,
q.product_count_2021 - s.product_count_2020 as difference
from product_count_2020 s
left join product_count_2021 q
on s.segment = q.segment
```

The products that have the highest and lowest manufacturing costs

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

Query used

```sql
with cte as
(
select p.product_code, p.product,
m.manufacturing_cost
from dim_product p
left join fact_manufacturing_cost m
on p.product_code= m.product_code
)
select product_code, product,
manufacturing_cost from cte
where manufacturing_cost = (select max(manufacturing_cost) from cte)
union
select product_code, product, manufacturing_cost
from cte
where manufacturing_cost = (select min(manufacturing_cost) from cte)
```

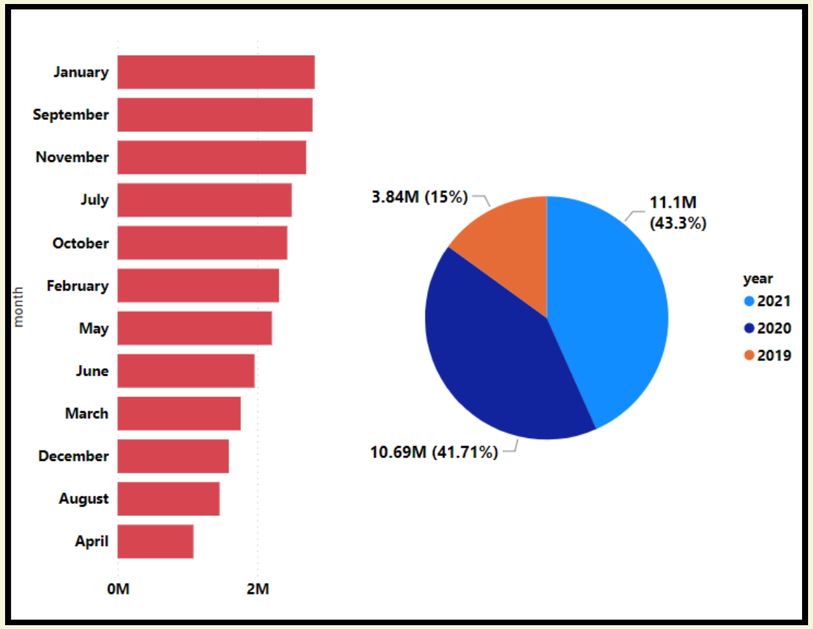
Top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market.

customer_code	customer	average_discount_percentage
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

Query used

```sql
select d.customer_code,
c.customer,
d.pre_invoice_discount_pct as average_discount_percentage
from fact_pre_invoice_deductions d
left join dim_customer c
on d.customer_code = c.customer_code
where c.market = 'India' and fiscal_year = '2021'
order by d.pre_invoice_discount_pct desc
limit 5
```

Gross sales amount for the customer “Atliq Exclusive” for each month



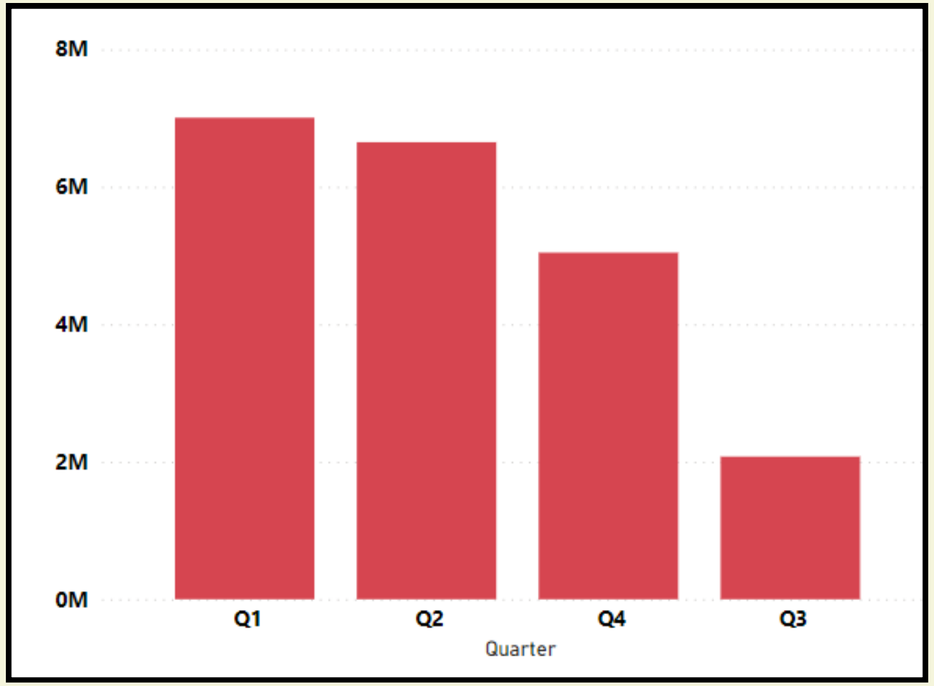
month	year	gross_price
September	2019	1066547.85
October	2019	991044.97
November	2019	1115465.27
December	2019	670126.78
January	2020	1092487.78
February	2020	910017.49
March	2020	243903.77
April	2020	198249.39
May	2020	468715.97
June	2020	557983.51
July	2020	973696.01
August	2020	569510.03

month	year	gross_price
September	2020	1725995.97
October	2020	1439452.36
November	2020	1585372.52
December	2020	923110.78
January	2021	1731068.09
February	2021	1402643.48
March	2021	1518630.04
April	2021	887564.41
May	2021	1741384.98
June	2021	1403534.86
July	2021	1520631.37
August	2021	891262.69

Query used

```sql
select MONTHNAME(m.date) as month,
year(m.date) as year,
round(sum(p.gross_price), 2) as gross_price
from fact_sales_monthly m
left join dim_customer c
on c.customer_code = m.customer_code
left join fact_gross_price p
on p.product_code = m.product_code
where c.customer = 'Atliq Exclusive'
group by month, year, month(m.date)
order by year, month(m.date)
```

Quarter of 2020, got the maximum total_sold_quantity

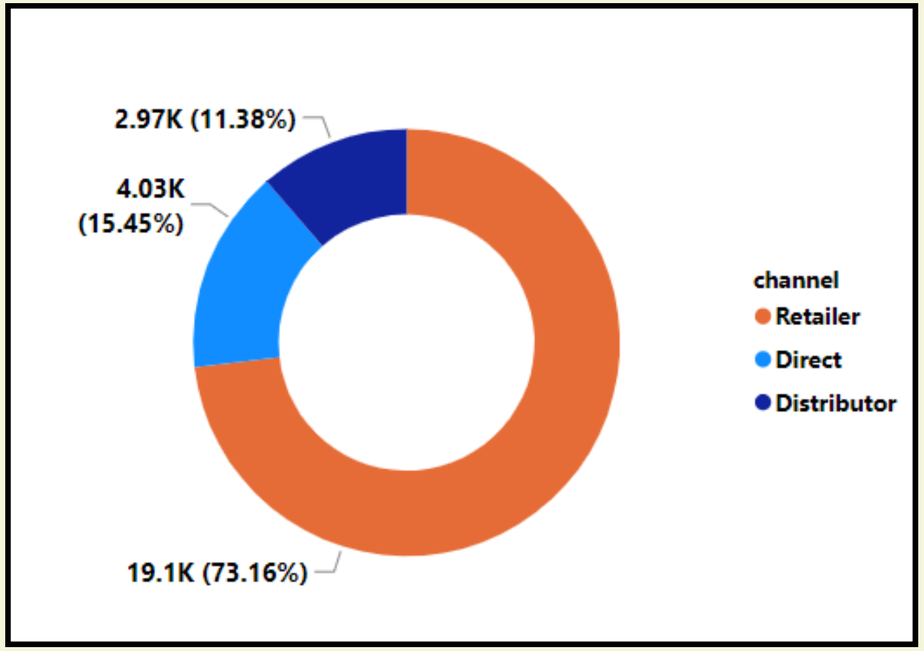


Quarter	total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

Query used

```sql
select
case
    when month(date) between 9 and 11 then 'Q1'
    when month(date) between 3 and 5 then 'Q3'
    when month(date) between 6 and 8 then 'Q4'
    else 'Q2'
    end as 'Quarter',
sum(sold_quantity) as total_sold_quantity
from fact_sales_monthly
where fiscal_year = '2020'
group by Quarter
order by total_sold_quantity desc
```

Channel helped to bring more gross sales in the fiscal year 2021 and its percentage of contribution



channel	gross_sales_mln	percentage
Retailer	19103.69	73.16
Direct	4034.79	15.45
Distributor	2972.18	11.38

Query used

```sql
with cte as (select c.channel,
sum(round((m.sold_quantity * p.gross_price)/100000, 2))
 as gross_sales_mln
from fact_sales_monthly m
left join fact_gross_price p
on m.product_code = p.product_code

left join dim_customer c
on c.customer_code = m.customer_code
where m.fiscal_year = '2021'
group by c.channel)
select *,
round( gross_sales_mln*100 / (select sum(gross_sales_mln) from cte), 2)
as percentage
from cte
order by gross_sales_mln desc
```

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

product_code	product	division	total_sold_quanity	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

Query used

```sql
with cte as (
select m.product_code, p.product,
p.division, m.sold_quantity
from fact_sales_monthly m
left join dim_product p
on p.product_code = m.product_code
where fiscal_year = '2021'
limit 30000000),

cte2 as (
select product_code, product, division,
sum(sold_quantity) as total_sold_quanity,
row_number()
over(partition by division order by sum(sold_quantity) desc)
as rank_order
from cte
group by product_code, product, division)

select * from cte2
where rank_order <=3
```