



Atliq Hardwares

Ad hoc Insights Consumer Goods

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Agenda

- ❑ Company Overview
- ❑ Company business in context to their market presence and Product line
- ❑ Data Model and Inputs
- ❑ Software Tools Used
- ❑ Ad- hoc Requests, Query, Output and visual Insights
- ❑ Appendix

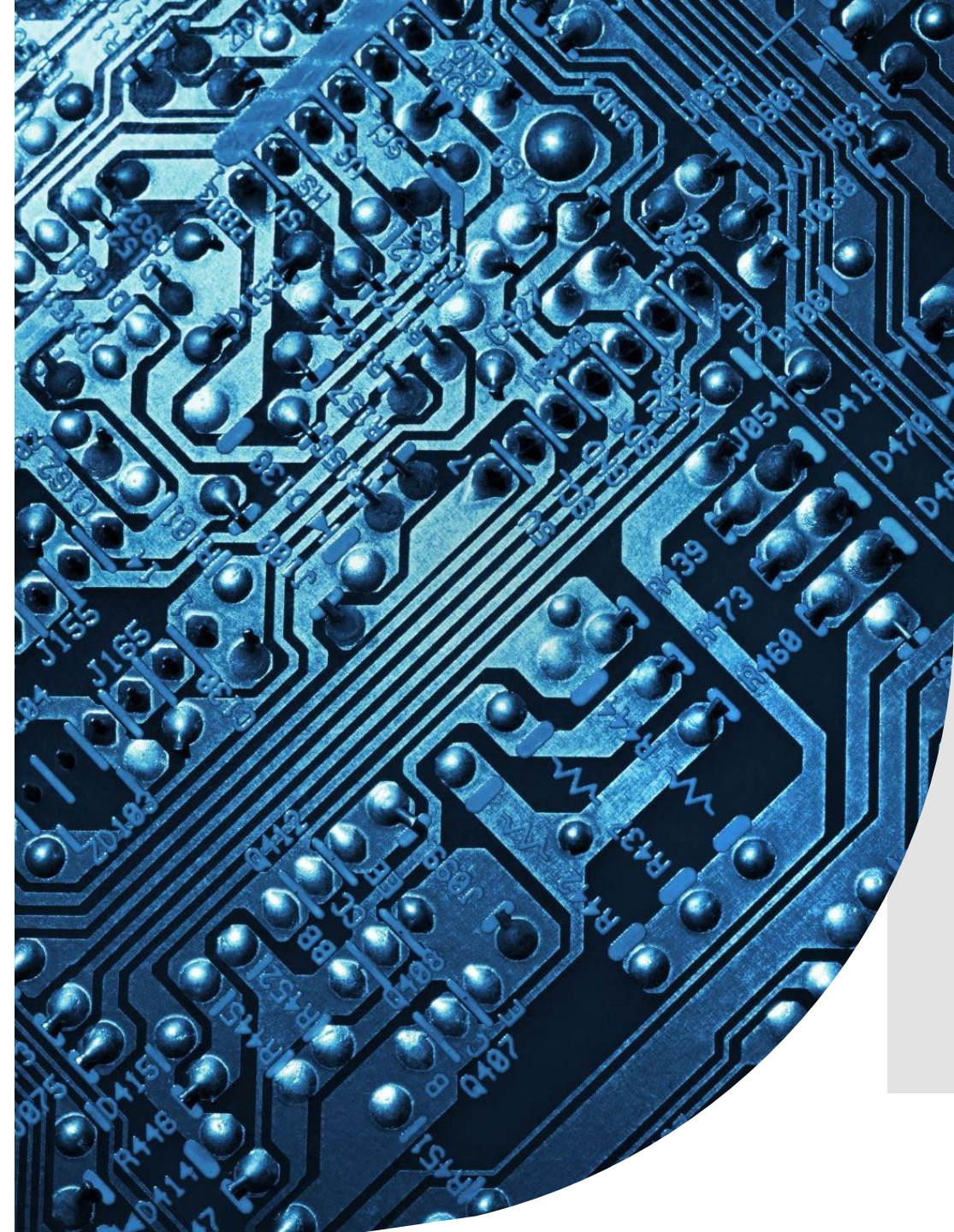


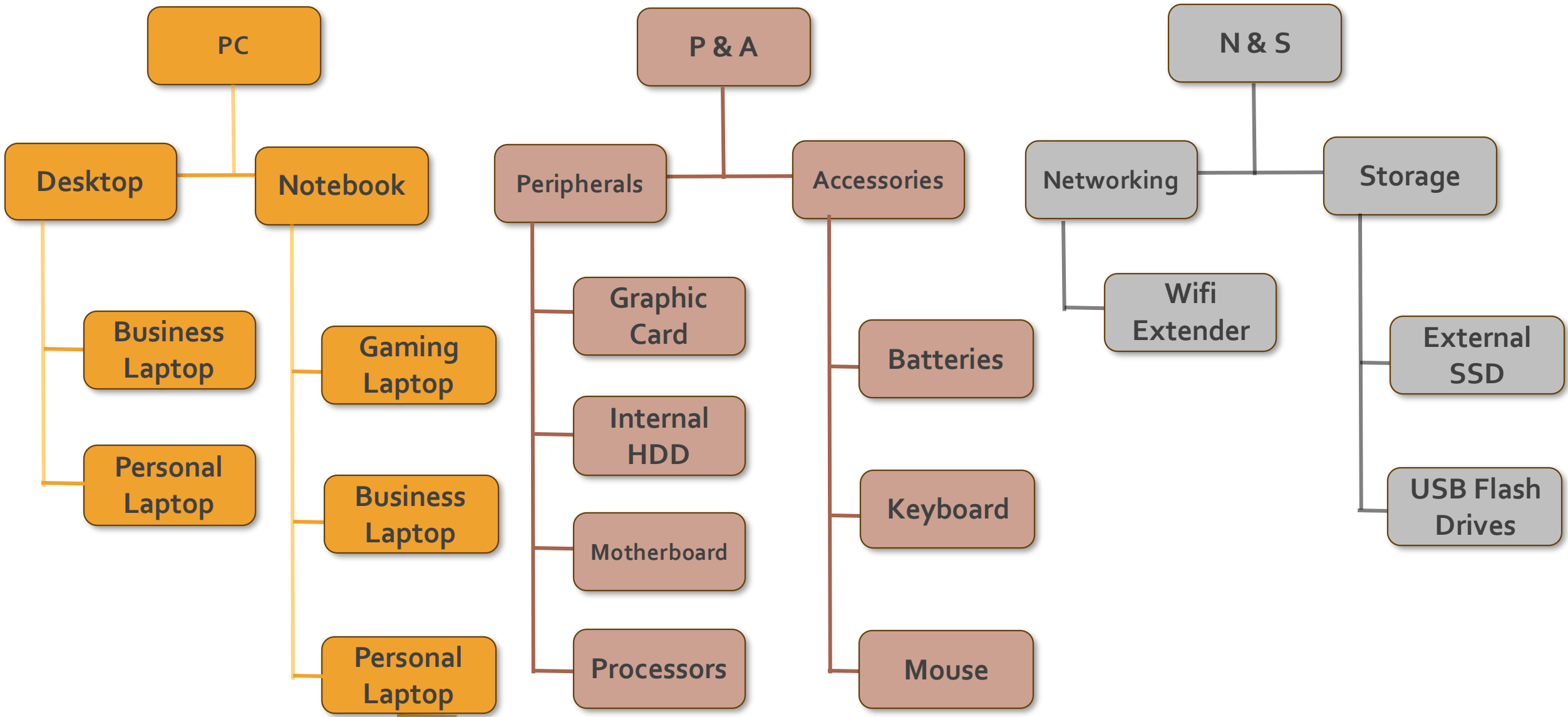
Company & Overview

Atliq Hardware - One of the leading computer hardware producers in India, with a strong presence in other countries

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

There are 10 ad-hoc requests for which the company needs insights

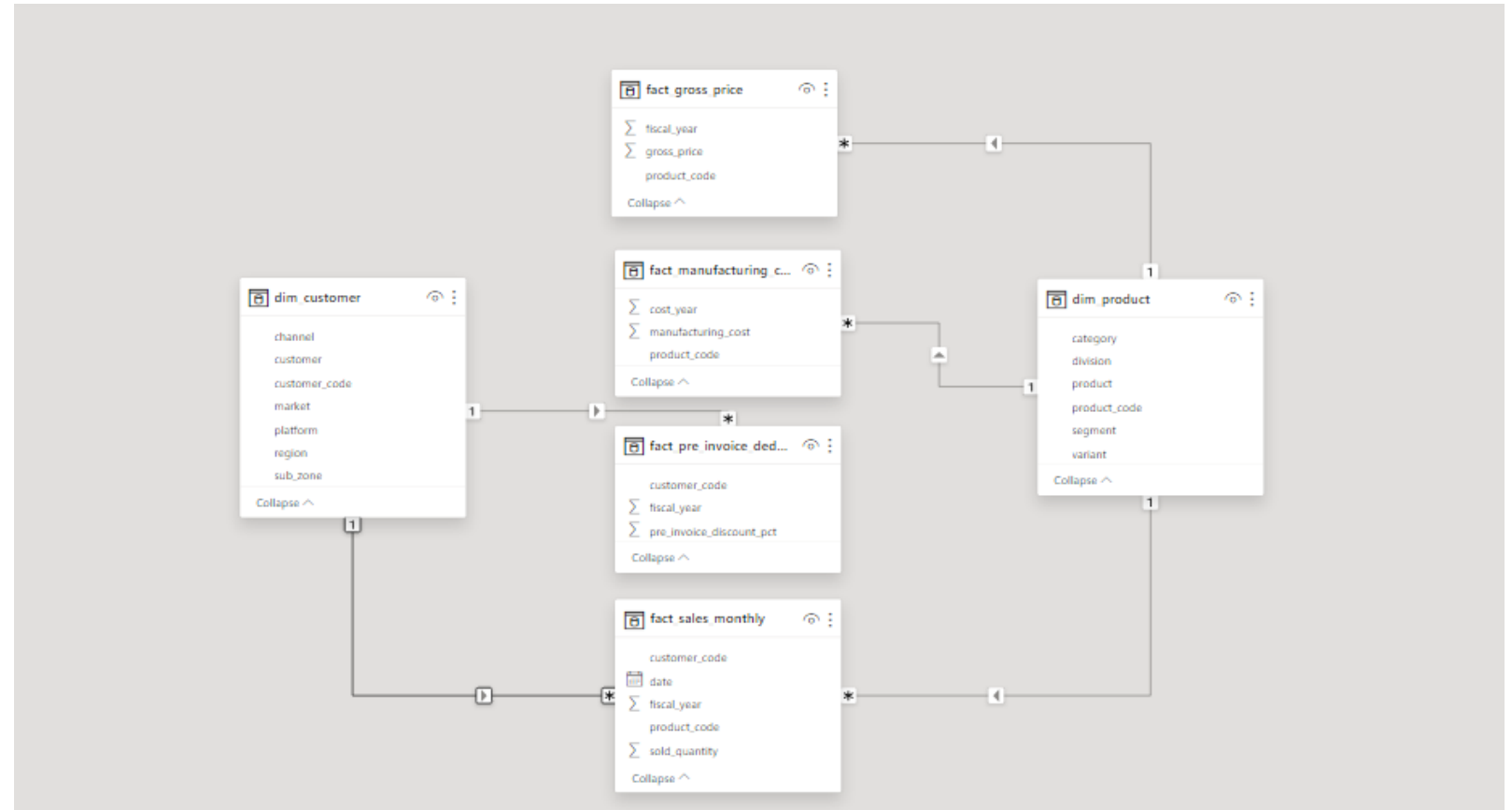




Atliq Hardware Product Chart

Data Model and Inputs

- Data consist of fact sale data of FY 2020 & 2021 and dimension tables of details such as Customer, Products detail etc.



Tools Used in this Project



Power BI

Ad- hoc Requests, Output and Insights



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

Query & Output

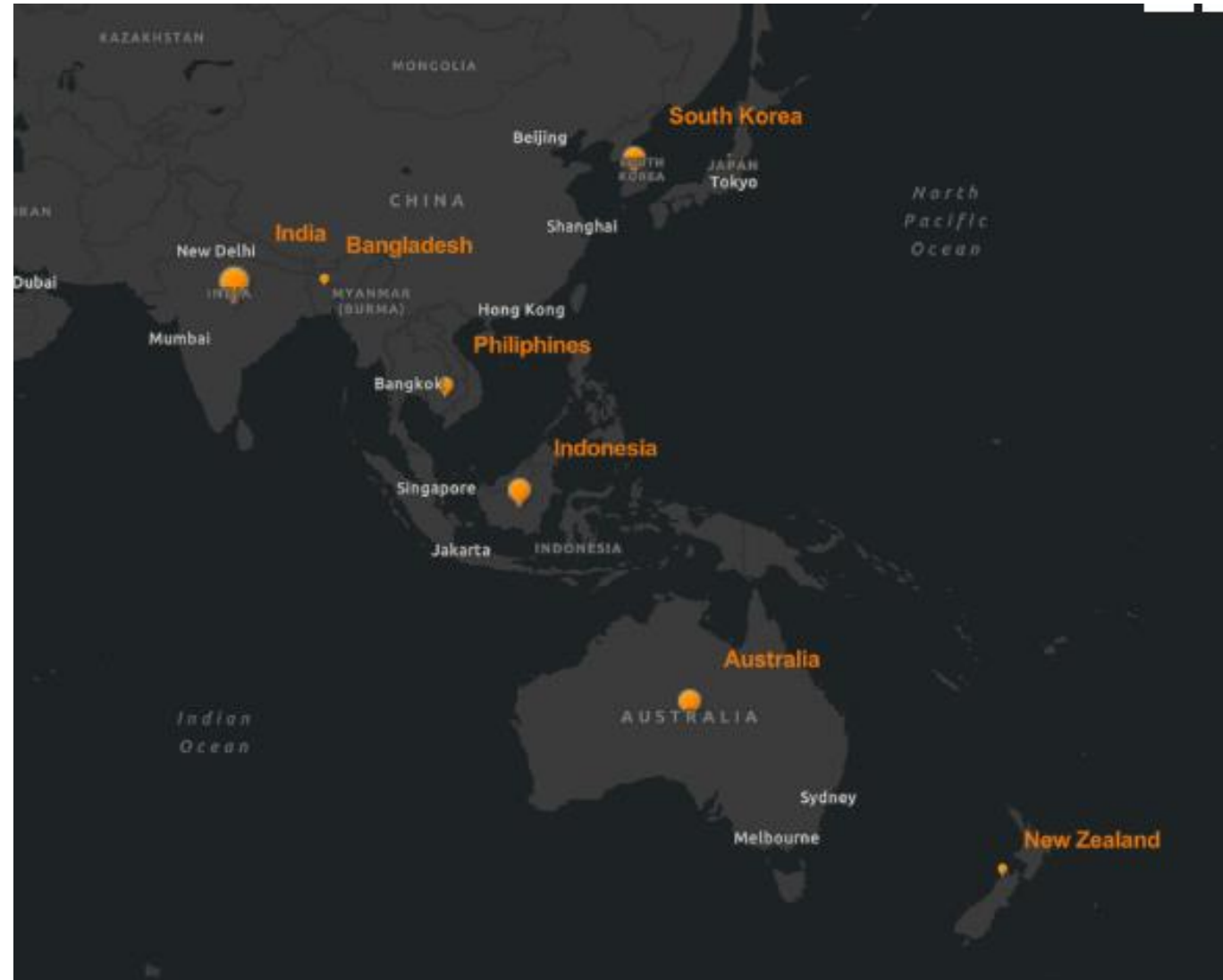
Query 1

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

	market
▶	India
	Indonesia
	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh

Insights

Atliq Exclusive
operates its
business in 8
major markets of
Asia
Pacific 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,
percentage_chg

Query

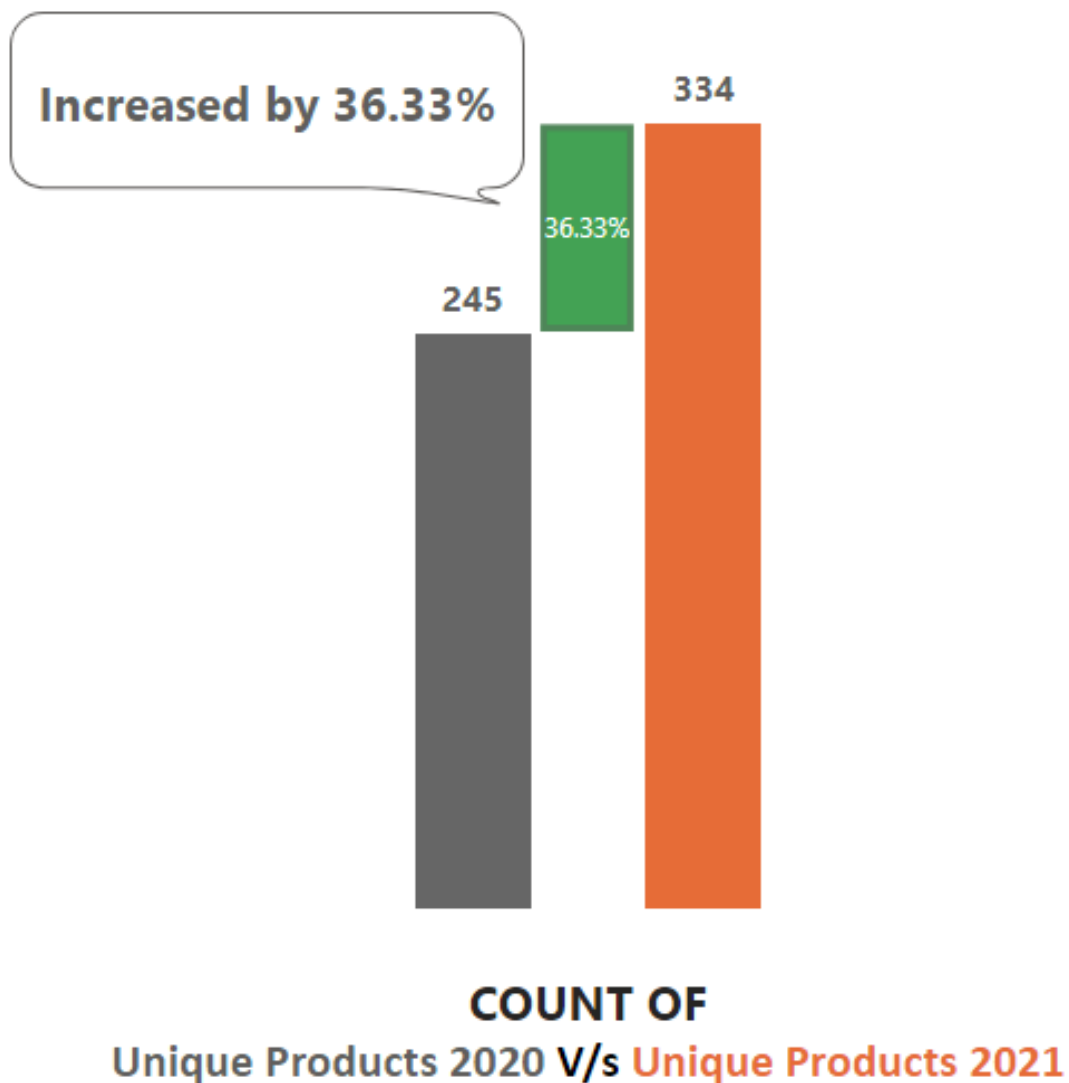
```
WITH product_count AS (  
  select  
    fiscal_year,  
    count(distinct product_code) as unique_products  
  from fact_sales_monthly  
  group by fiscal_year )  
  
select  
  pc20.unique_products as unique_products2020 ,  
  pc21.unique_products as unique_products2021,  
  round(((pc21.unique_products-pc20.unique_products)/pc20.unique_products) * 100,2)  
  as percentage_chg  
from product_count pc20  
cross join product_count pc21  
on pc20.fiscal_year= 2020 and pc21.fiscal_year= 2021;
```



	unique_products2020	unique_products2021	percentage_chg
▶	245	334	36.33

Insights

In fiscal year 2020, our product inventory comprised 245 items. By fiscal year 2021, this figure surged by 36% to reach a total of 334 products.



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

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

Output

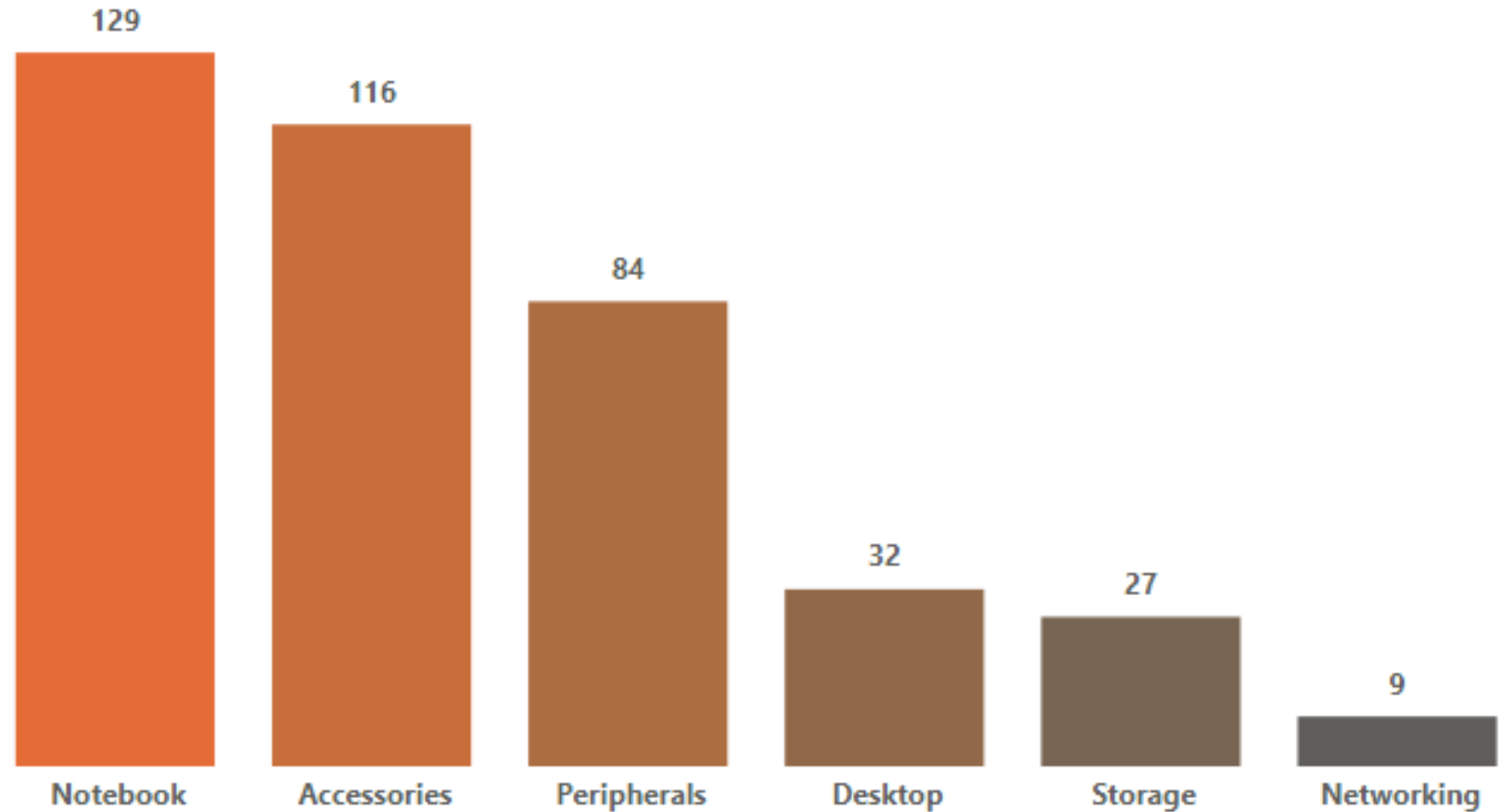
Request 3

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

Query

Insights

1. Notebooks, accessories, and peripherals are outpacing desktops, storage, and networking in manufacturing growth.
2. Together, notebooks, accessories, and peripherals make up 83% of our manufactured products.
3. Desktops, storage, and networking represent only 17% of our total manufacturing output



Unique **product counts** for each **segment**

Request 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

```
WITH product_count AS (  
  select  
    p.segment,s.fiscal_year,  
    count(distinct s.product_code) as product_count  
  from fact_sales_monthly s  
  join dim_product p  
  on s.product_code=p.product_code  
  group by p.segment,s.fiscal_year )  
  
  select  
    pc20.segment,  
    pc20.product_count as product_count_2020,  
    pc21.product_count as product_count_2021,  
    pc21.product_count-pc20.product_count as difference  
  from product_count pc20  
  join product_count pc21  
  on pc20.segment=pc21.segment and  
  pc20.fiscal_year=2020 and  
  pc21.fiscal_year= 2021  
  order by difference desc;
```

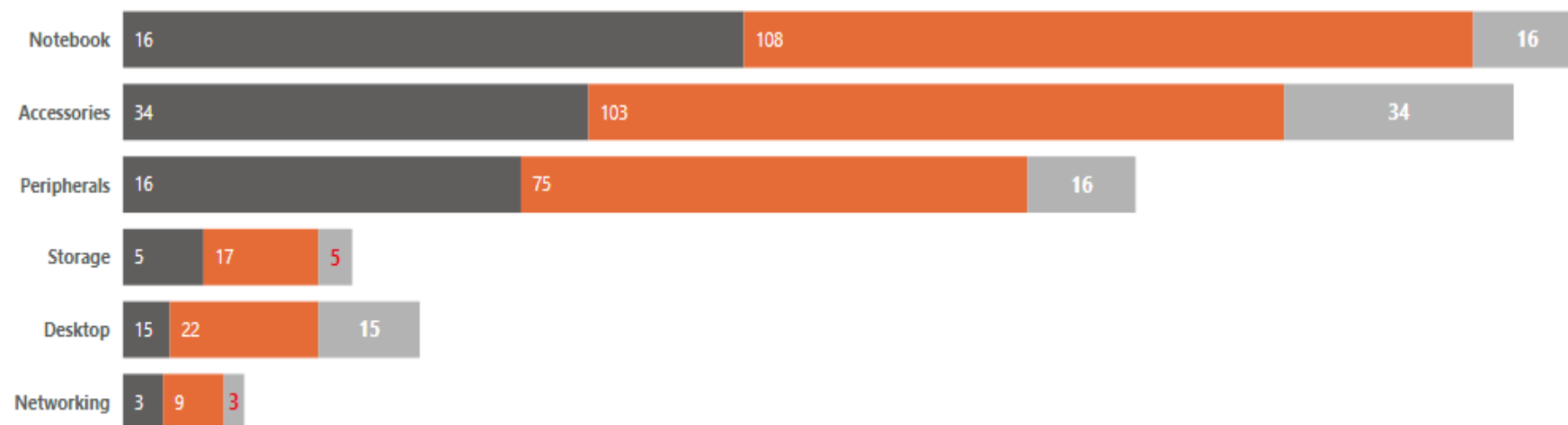
Query & Output

	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

- The Accessories segment experienced the most significant rise in unique products with the introduction of 34 new items.
- Notebooks and Peripherals saw an increase of 16 new unique products each.
- The Product Development team demonstrated commendable progress in the Desktop segment, elevating unique products from 7 to 22.
- The Networking segment displayed the lowest growth, introducing only 3 new products since 2020.

Unique product difference per segment from 2020 to 2021



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



Output

Query

#Request 5

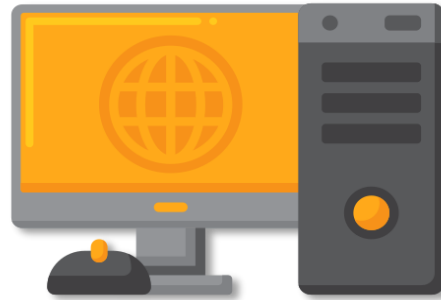
```
select
    p.product_code,
    p.product, cost_year,
    mc.manufacturing_cost
from fact_manufacturing_cost mc
join dim_product p
on p.product_code = mc.product_code
where manufacturing_cost in ( select max(manufacturing_cost) from fact_manufacturing_cost)
or
manufacturing_cost in ( select min(manufacturing_cost) from fact_manufacturing_cost);
```

	product_code	product	cost_year	manufacturing_cost
▶	A2118150101	AQ Master wired x1 Ms	2020	0.8920
	A6120110206	AQ HOME Allin1 Gen 2	2021	240.5364

Insights

- Mouse: AQ Master wired x1 Ms (Variant:Standard1) has the lowest manufacturing cost.
- Personal Desktop: AQ Home Allin1 Gen2 (Variant:Plus3) has the highest manufacturing cost.

Highest manufacturing cost



**AQ HOME Allin1 Gen 2 (Plus 3)
Personal Desktop (\$240.54)**

Lowest manufacturing cost



**AQ Master wired x1 Ms (Standard 1)
Mouse (\$0.89)**

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
avg_discount_percentage

	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

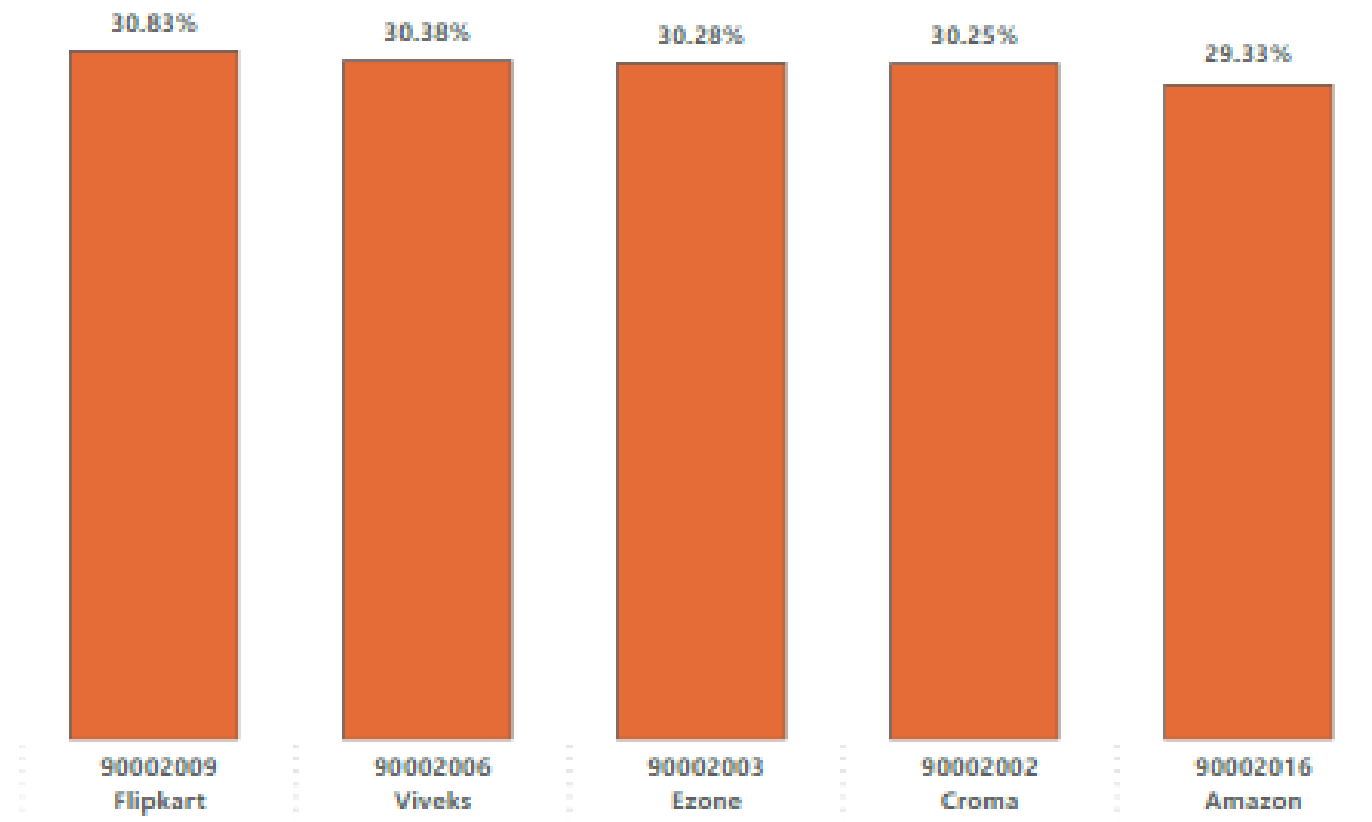
```
• select
    c.customer_code,
    c.customer,
    round(avg(pre.pre_invoice_discount_pct),4) as average_discount_percentage
from
    fact_pre_invoice_deductions pre
join
    dim_customer c on pre.customer_code = c.customer_code
where
    market = "India" and fiscal_year = 2021
group by
    c.customer_code, c.customer
order by
    average_discount_percentage desc
limit 5;
```

Output

Query

Insights

- Flipkart secured the highest pre-invoice discount percentage at **30.83%**.
- The collective average pre-invoice discount for the top 5 customers stands at approximately **30.21%**.
- In FY 2021, the average discount extended to all customers in the Indian market was **23.57%**.



Top 5 Indian customers with highest average discount percentage for FY 2021

```

• with cte1 as (Select
    customer,
    monthname(date) as Month_name,
    month(date) as Month_number,
    year(date) as Year,
    (g.gross_price*s.sold_quantity) as gross_sales
from fact_sales_monthly s
join fact_gross_price g
on s.product_code = g.product_code
join dim_customer c
on s.customer_code = c.customer_code
where c.customer = "Atliq Exclusive")
select
Month_name,
Year,
concat(round(sum(gross_sales)/1000000,2)," M") as Gross_sales_Amount
from cte1
group by year, Month_name, Month_number
order by year, Month_number asc;

```

Query

Output

	Month_name	Year	Gross_sales_Amount
▶	September	2019	9.09 M
	October	2019	10.38 M
	November	2019	15.23 M
	December	2019	9.76 M
	January	2020	9.58 M
	February	2020	8.08 M
	March	2020	0.77 M
	April	2020	0.80 M
	May	2020	1.59 M
	June	2020	3.43 M
	July	2020	5.15 M
	August	2020	5.64 M
	September	2020	19.53 M

Request 7

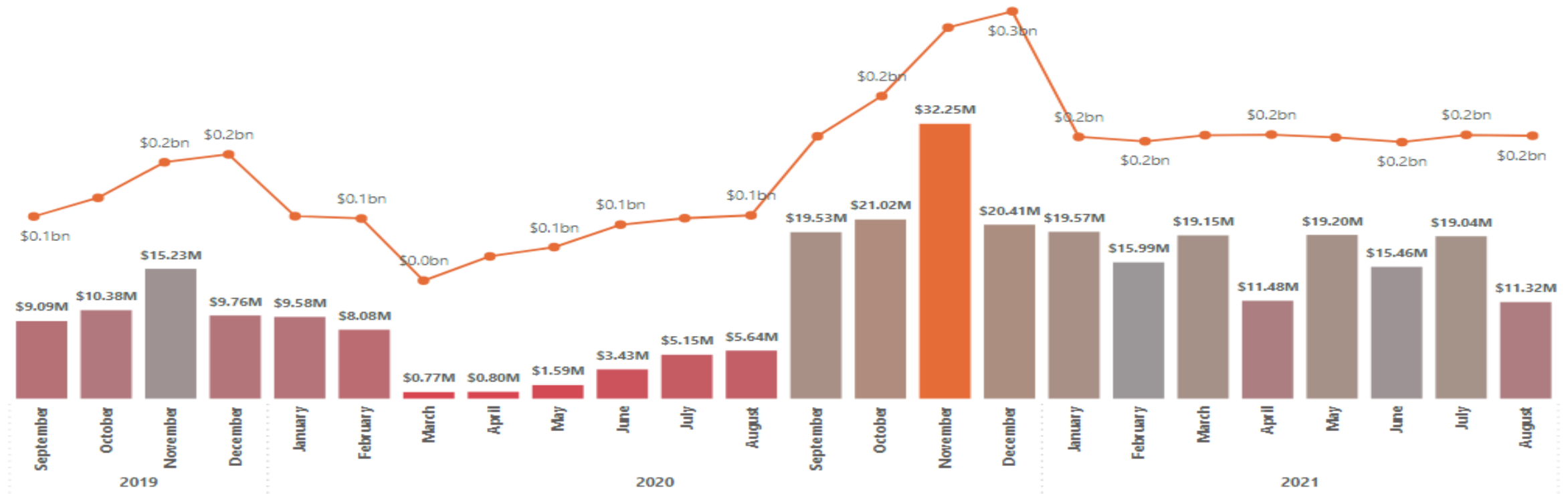
Get the complete report of the Gross sales amount for the customer "Atliq Exclusive" for each month. This analysis helps to get an idea of low and high-performing months and take strategic decisions.

The final report contains these columns:

Month name

Year

Gross sales Amount



Gross sales amount report for Atliq Exclusive by month

Request 7

Insights

- Atliq Exclusive Store achieved its highest sales in November 2020, totaling \$30.25 million, while recording its lowest sales in March 2020, amounting to \$0.77 million.
- The period from March to August experienced a decline in sales attributed to the pandemic-induced shutdown of stores.
- Sales began to rebound from September 2020 onwards, driven by the relaxation of lockdown restrictions and the commencement of the festival season in both Indian and other markets.

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

Query

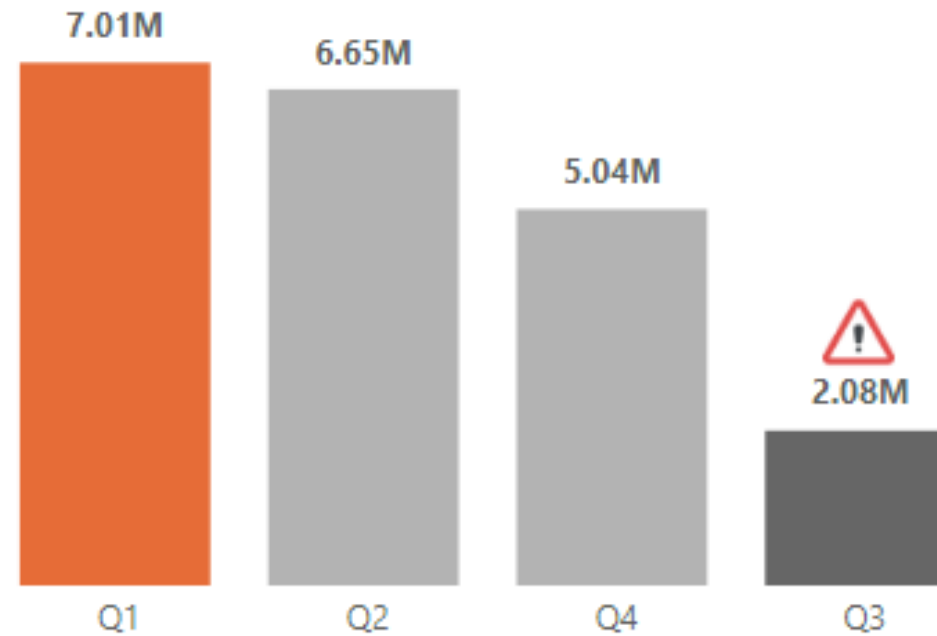
```
• SELECT
  CASE
    WHEN date BETWEEN '2019-09-01' AND '2019-11-01' THEN 'Quarter1'
    WHEN date BETWEEN '2019-12-01' AND '2020-02-01' THEN 'Quarter2'
    WHEN date BETWEEN '2020-03-01' AND '2020-05-01' THEN 'Quarter3'
    WHEN date BETWEEN '2020-06-01' AND '2020-08-01' THEN 'Quarter4'
  END AS Quarter,
  Concat(round(SUM(sold_quantity)/1000000,2),"M") AS total_sold_quantity
FROM
  fact_sales_monthly
WHERE
  fiscal_year = 2020
GROUP BY
  Quarter
ORDER BY
  total_sold_quantity DESC;
```

Output

	Quarter	total_sold_quantity
►	Quarter1	7.01M
	Quarter2	6.65M
	Quarter4	5.04M
	Quarter3	2.08M

Insights

- Most products were sold the most during the first three months of FY 2020 (September to November).
- Sales dropped to 2.1 million units in the third quarter (March, April, and May) of FY 2020 due to COVID-19 being at its worst.
- Despite the ongoing pandemic, we began to recover early, especially during the fourth quarter. This was probably because more students needed computers like desktops and laptops for online classes.



Total sold quantity in FY 2020 by Quarter

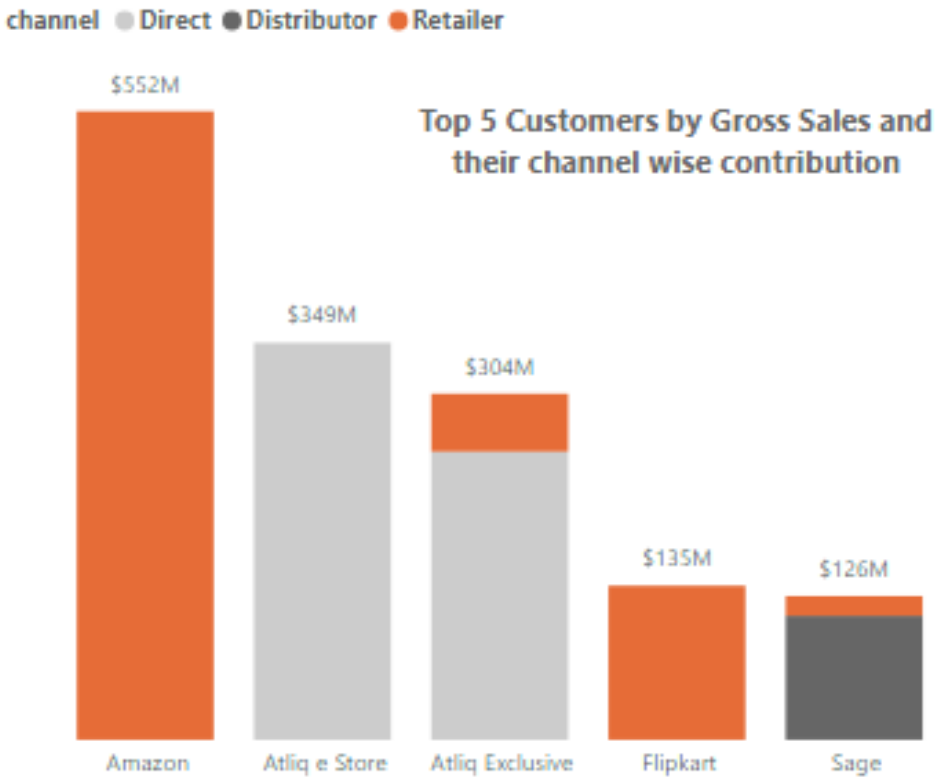
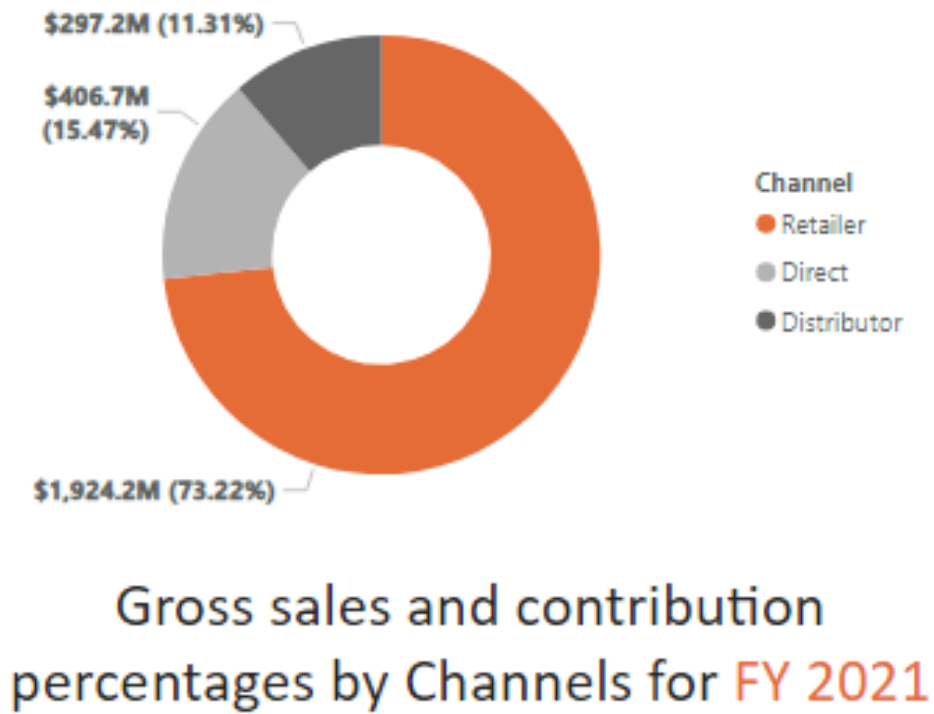
Request 9

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

```
• with channel_sales as(  
  select  
    c.channel,  
    sum(g.gross_price*s.sold_quantity) as gross_sales,  
    sum(sum(g.gross_price*s.sold_quantity)) over() as total_sales  
  from fact_sales_monthly s  
  join fact_gross_price g on s.product_code = g.product_code  
  join dim_customer c on s.customer_code= c.customer_code  
  
  where s.fiscal_year = 2021  
  group by c.channel)  
  
  select  
    channel,  
    round(gross_sales/1000000,2) as gross_sales_mln,  
    round((gross_sales/total_sales)*100,2) as percentage_contribution  
  
  from channel_sales  
  order by gross_sales_mln desc;
```

	channel	gross_sales_mln	percentage_contribution
►	Retailer	1924.17	73.22
	Direct	406.69	15.47
	Distributor	297.18	11.31



Insights

Most of the sales, totaling \$1924 million, came from the Retailer Channel, making up 73.22% of the total. The Distributor Channel, on the other hand, had the smallest share, contributing only \$297.2 million, which is 11.31% of the sales.

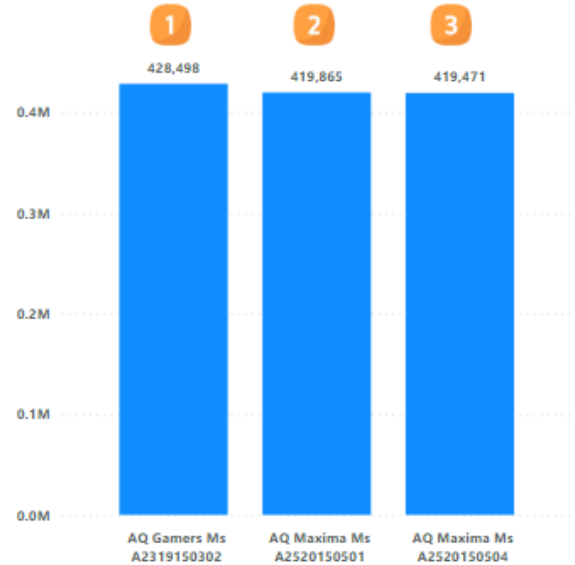
Request #10

Most of the sales, totaling \$1924 million, came from the Retailer Channel, making up 73.22% of the total. The Distributor Channel, on the other hand, had the smallest share, contributing only \$297.2 million, which is 11.31% of the sales.

division
product_code
product
total_sold_quantity
rank_order

```
• with product_sales as (select p.division,
  s.product_code, p.product,
  sum(s.sold_quantity) as total_sold_quantity
  from fact_sales_monthly s
  join dim_product p
  on s.product_code = p.product_code
  where s.fiscal_year=2021
  group by p.division,s.product_code,p.product),
• product_rank as (select division,
  product_code,
  product,
  total_sold_quantity,
  rank() over(partition by division order by total_sold_quantity desc) as rank_order
  from product_sales)
select ps.division, ps.product_code, ps.product, ps.total_sold_quantity,pr.rank_order
from product_sales ps
join product_rank pr
on ps.product_code=pr.product_code
where rank_order <= 3;
```

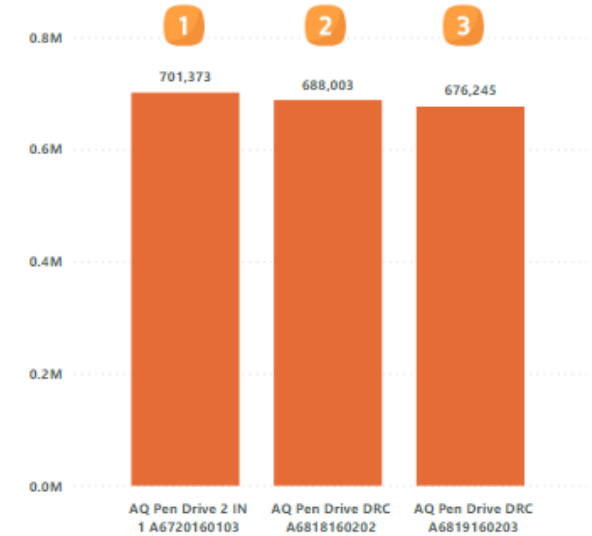
	division	product_code	product	total_sold_quantity	rank_order
▶	N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
	N & S	A6818160202	AQ Pen Drive DRC	688003	2
	N & S	A6819160203	AQ Pen Drive DRC	676245	3
	P & A	A2319150302	AQ Gamers Ms	428498	1
	P & A	A2520150501	AQ Maxima Ms	419865	2
	P & A	A2520150504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



Top 3 highest-selling products in
P & A Division for FY 2021



Top 3 highest-selling products in
PC Division for FY 2021



Top 3 highest-selling products in
N&S Division for FY 2021

Insights

- N&S achieved its highest sales in FY 2021 with the AQ Pen Drive 2 IN 1, selling a total of 701,373 units, followed closely by two variants of AQ Pen Drive DRC, with 688,003 and 676,245 units sold respectively.
- P&A's top-selling product is the AQ Gamers Ms, which sold 428,498 units, followed by two variants of AQ Maxima Ms.
- The top-selling product for the PC division is the AQ Digit PC, with 17,434 units sold.
- Strategic decisions should be considered to enhance sales in the PC division.

Appendix

Portfolio : [Portfolio - Vineet Patyal | Codebasics](#)

GitHub Link : [VineetPatyal/Ad_hoc_consumer_goods_Analysis \(github.com\)](#)

Linkedin Profile : [\(2\) Vineet Patyal | LinkedIn](#)





THANK YOU
HAVE A GOOD DAY