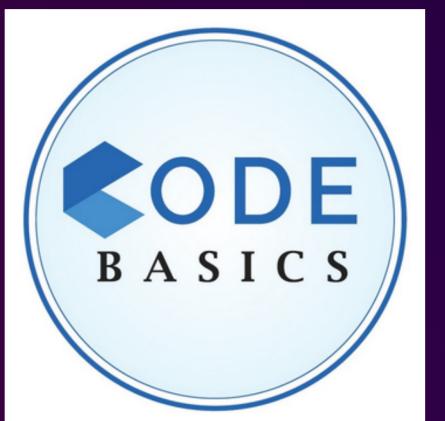




CONSUMER GOODS ANALYSIS



PRESENTED BY
Akshit Singhal

24 - JAN - 2023



Problem statement-

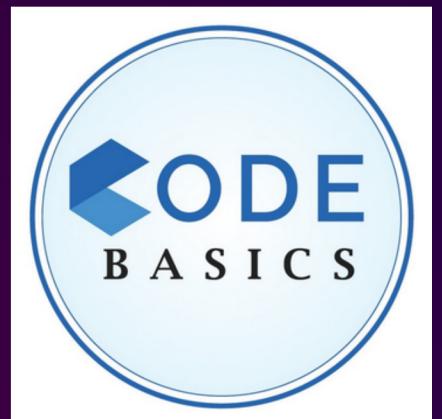
Atliq Hardwares (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too. They want to make quick and smart data-informed decisions to expand in different markets.



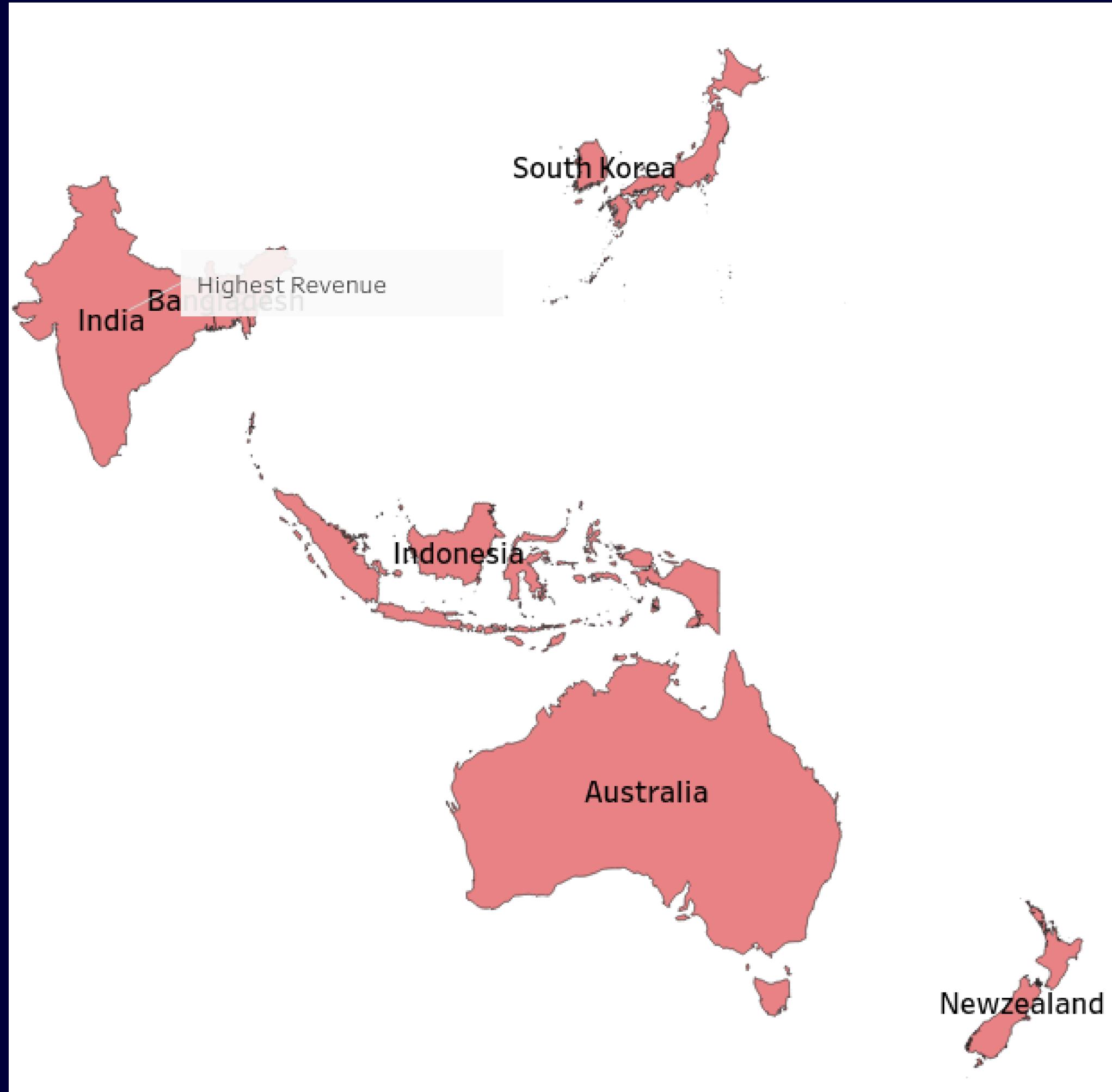


Request-1

List of market in which customer "Atliq Exclusive" operates its business in the "APAC" region



market
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philiphines
South Korea



AltIQ Exclusive operates in eight different market in APAC Regions.

India is highest revenue market in APAC region



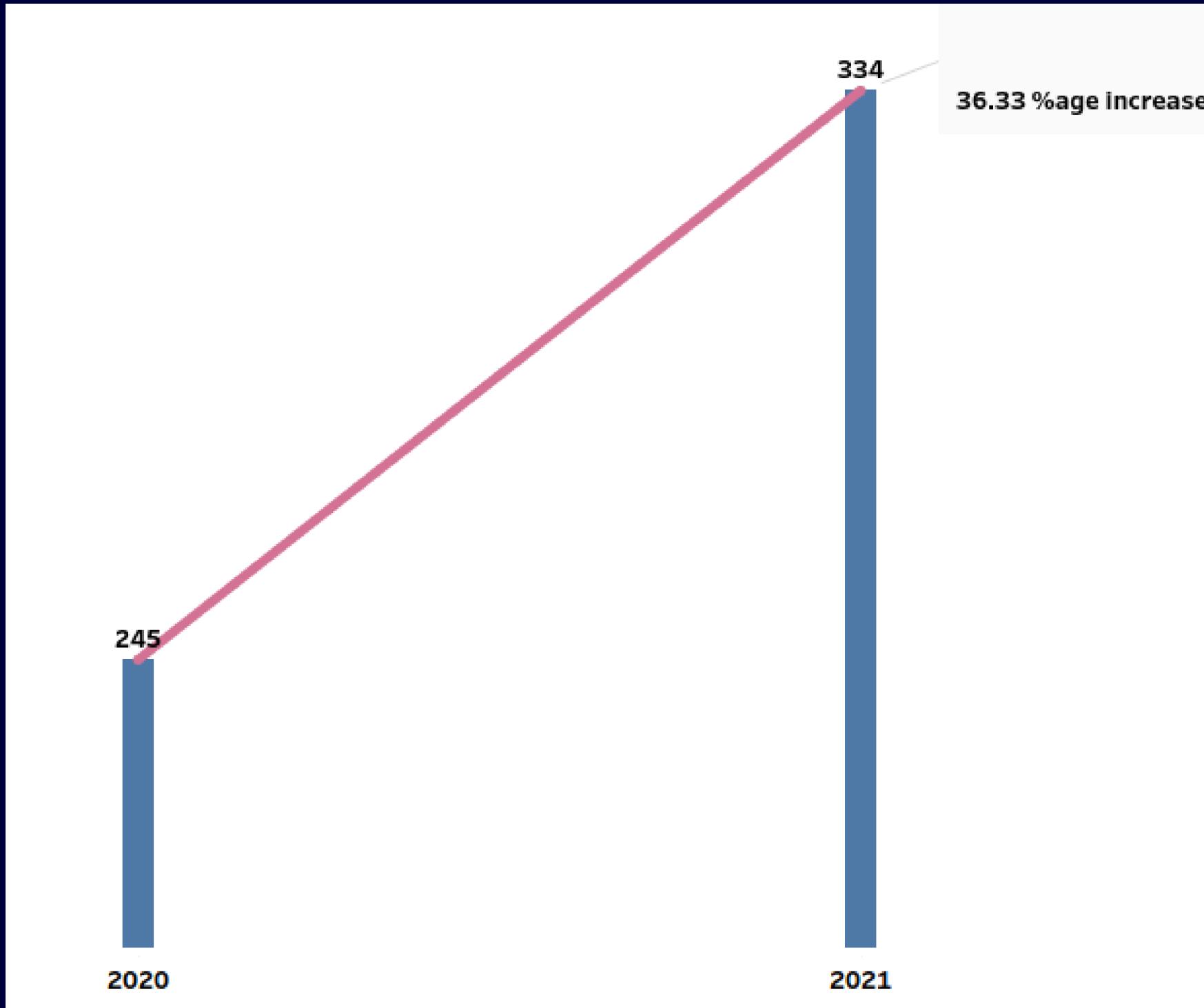
Request-2

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



```
-> with 2020_products as(  
      select count(distinct(product_code)) as cnt  
      from dim_product  
      join fact_gross_price  
      using (product_code)  
      where fiscal_year = 2020),  
  
-> 2021_products as(  
      select count(distinct(product_code)) as cnt  
      from dim_product  
      join fact_gross_price  
      using (product_code)  
      where fiscal_year = 2021)  
  
      select a.cnt as unique_products_2020,  
            b.cnt as unique_products_2021,  
            round(((b.cnt-a.cnt)/a.cnt)*100,2) as percentage_chg  
      from 2020_products a  
      join 2021_products b
```

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

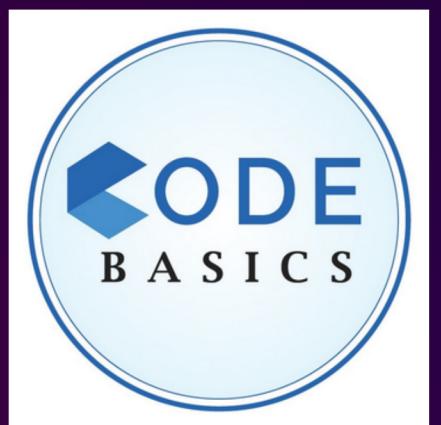


36.33% YoY
increase
in product count
from 245 in 2020
to 334 in 2021



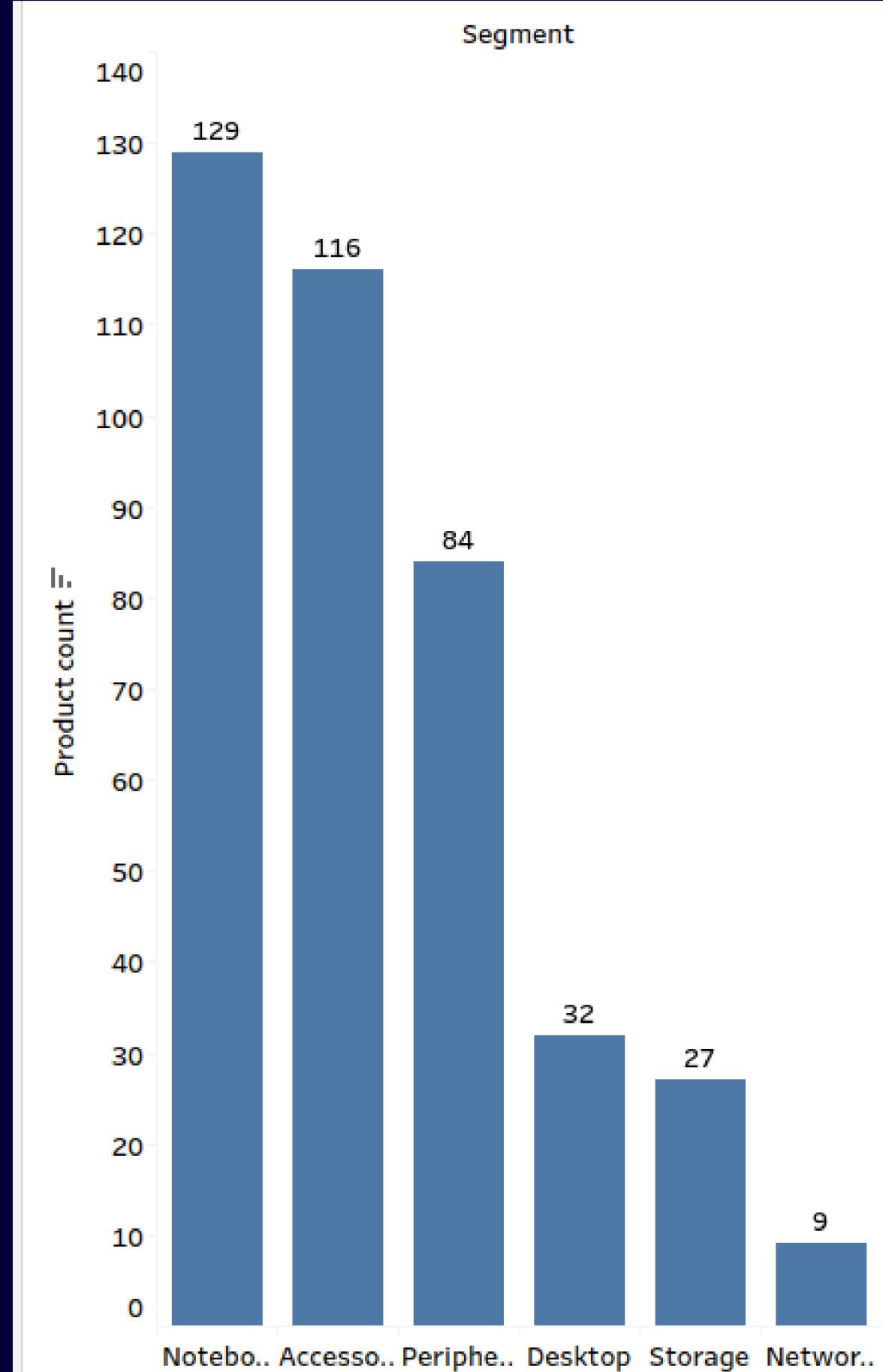
Request-3

Unique product count
by segment



```
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

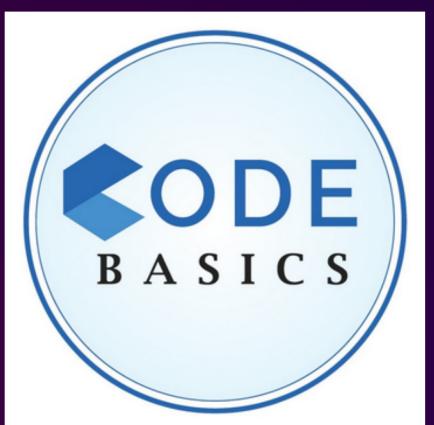


- Notebook segment has highest products i.e. 129 followed by
- Accessories segment that have 116 unique products.
- Network segment has 9 products only.



Request-4

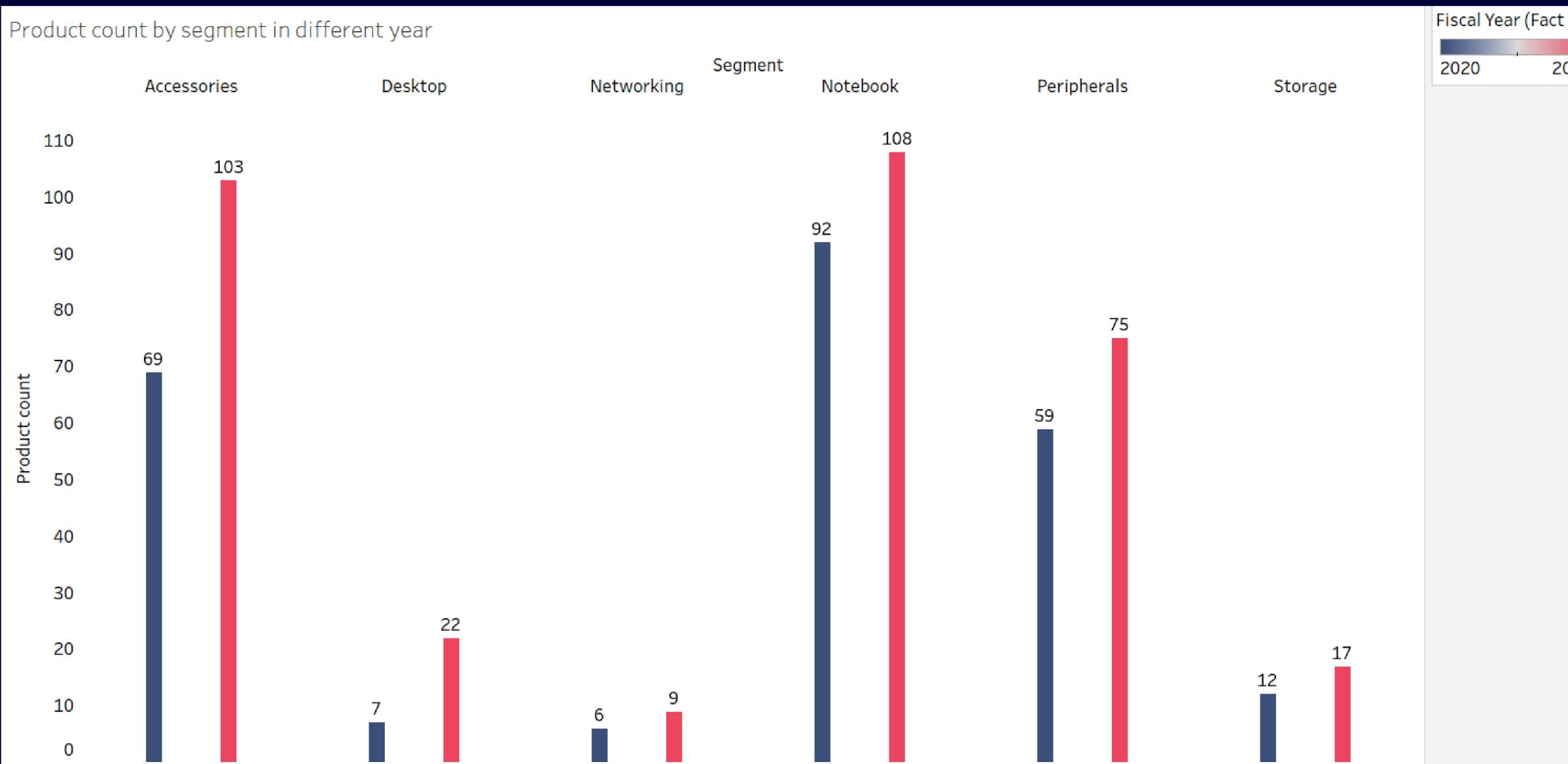
Which segment had the most increase in unique products in 2021 vs 2020?



```
with 2020_products as (
    select segment, count(distinct(p.product_code)) as product_count
    from dim_product p
    join fact_gross_price
    using(product_code)
    where fiscal_year = 2020
    group by segment),

2021_products as(
    select segment, count(distinct(p.product_code)) as product_count
    from dim_product p
    join fact_gross_price
    using(product_code)
    where fiscal_year = 2021
    group by segment)

select a.segment, a.product_count as product_count_2020,
b.product_count as product_count_2021, b.product_count-a.product_count as difference
-- ,round(((b.product_count-a.product_count)/a.product_count)*100,2) as percinc
from 2020_products a
join 2021_products b
using(segment)
```



- Desktop segment has highest 214% increase in product count
- Notebook segment has lowest 17% increase in product count

- Accessories segment has added 34 new products from 2020 to 2021 highest in all.

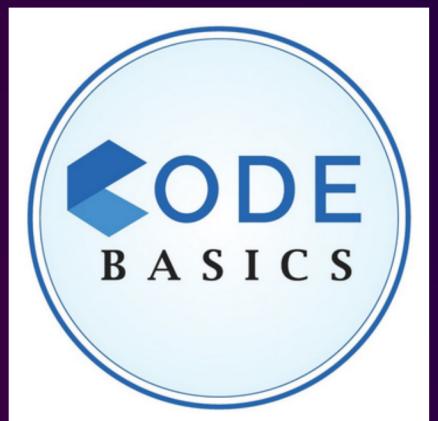
segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5



Request-5

Products that have the highest and lowest manufacturing costs.

```
select p.product_code, p.product,
m.manufacturing_cost from dim_product p
join fact_manufacturing_cost m
using (product_code)
where manufacturing_cost = (select max(manufacturing_cost) from fact_manufacturing_cost)
union
select p.product_code, p.product,
m.manufacturing_cost from dim_product p
join fact_manufacturing_cost m
using (product_code)
where manufacturing_cost = (select min(manufacturing_cost) from fact_manufacturing_cost)
```

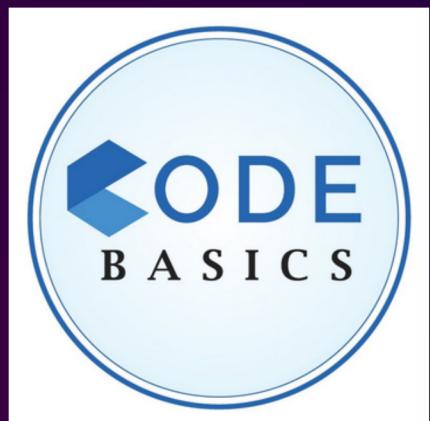


product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920



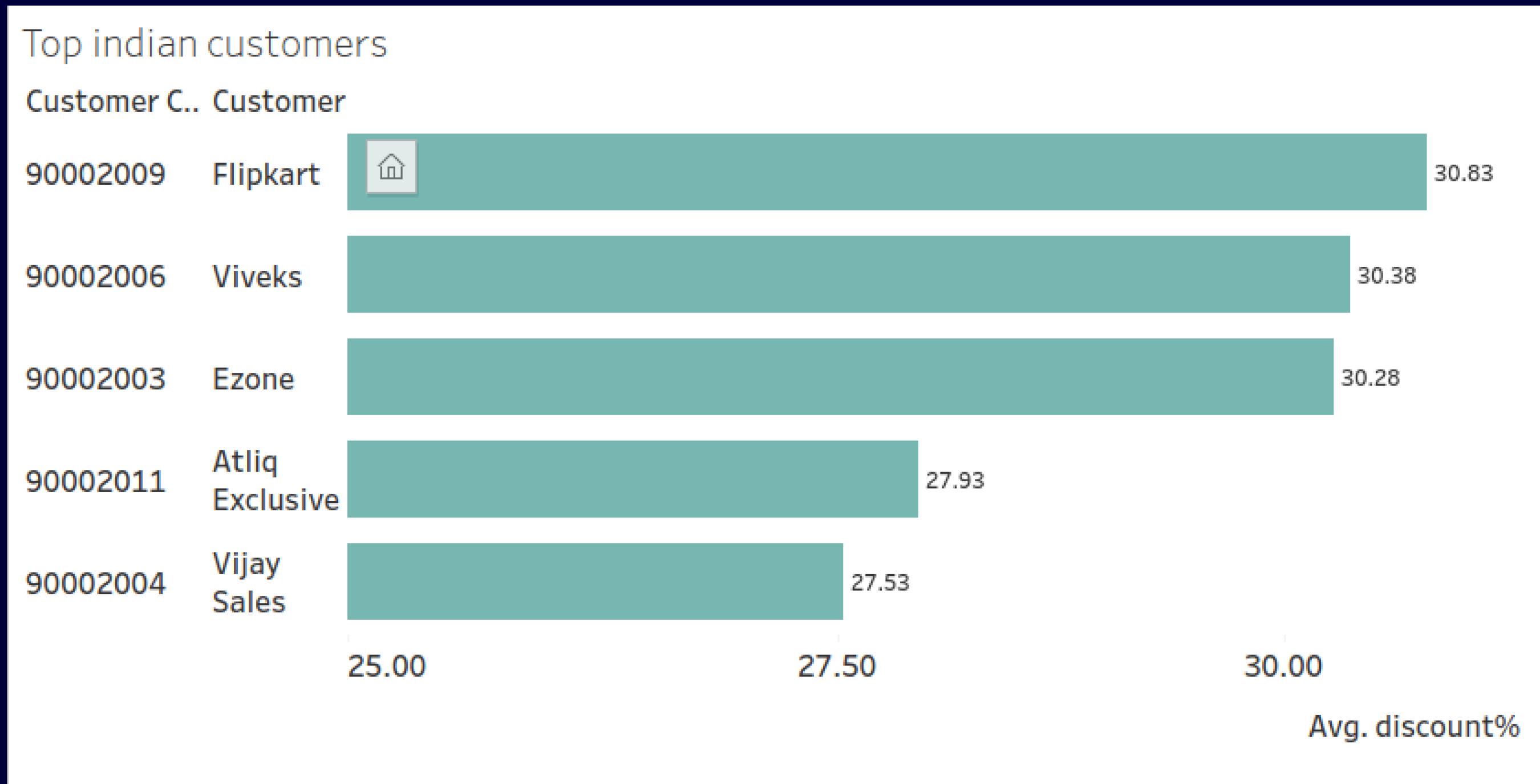
Request-6

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



```
select customer_code, customer,
round(pre_invoice_discount_pct*100,2) as average_discount_percentage
from dim_customer
join fact_pre_invoice_deductions
using (customer_code)
where market = 'India' and fiscal_year=2021
order by pre_invoice_discount_pct 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 receive highest pre invoice
discount in year 2021 from indian market

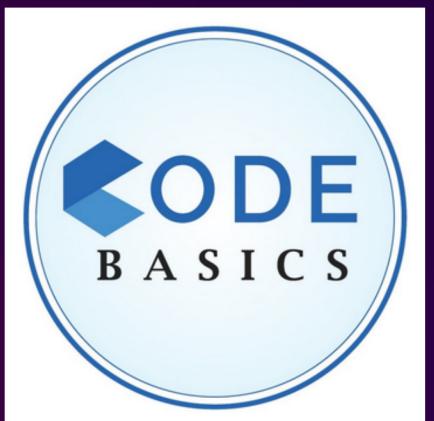


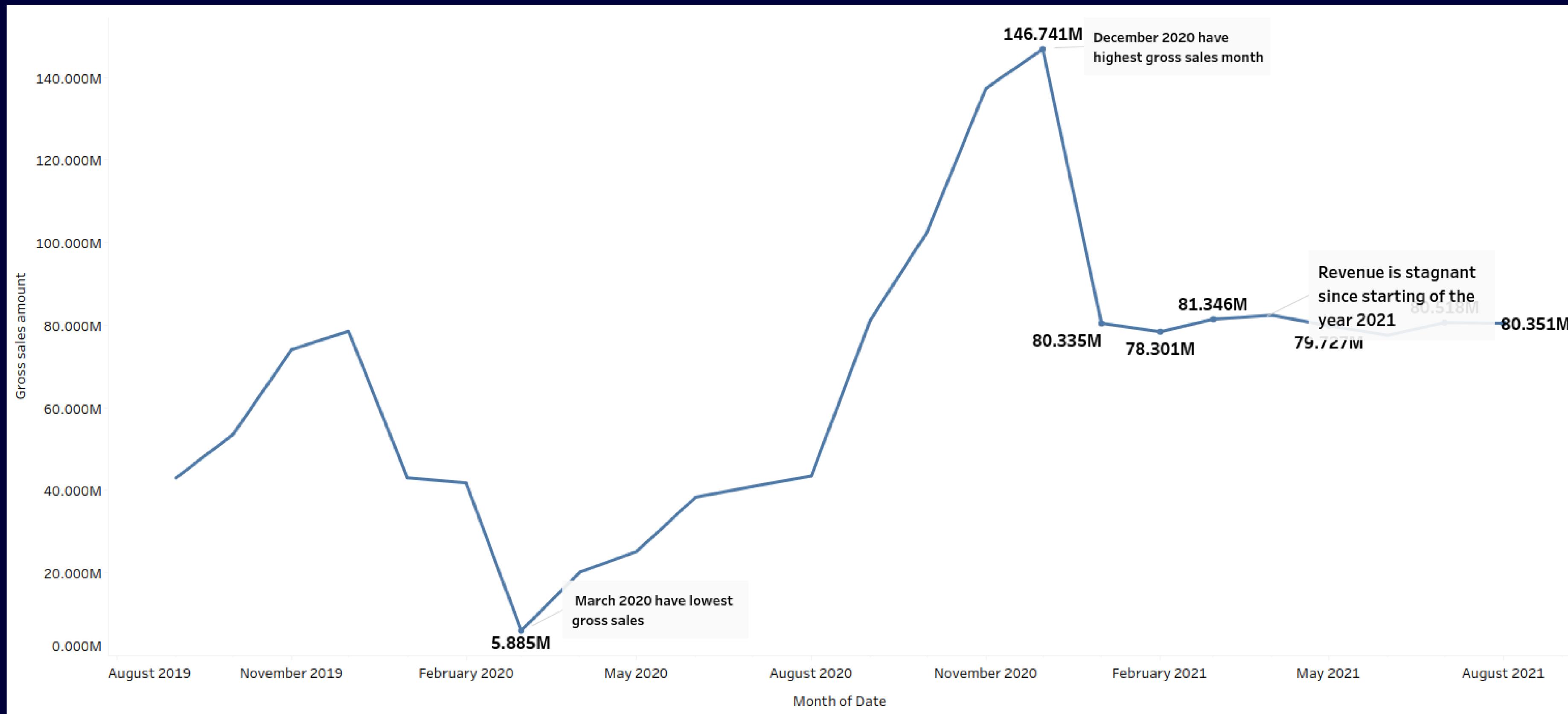
Request-7

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

```
select month(date) as month,  
year(date) as year ,  
round(sum(sold_quantity*gross_price),2)  
from fact_sales_monthly  
join fact_gross_price  
using (product_code, fiscal_year)  
join dim_customer  
using (customer_code)  
where customer = 'Atliq Exclusive'  
group by month, year  
order by year, month
```

month	year	gross_sales_amount
9	2019	4496259.67
10	2019	5135902.35
11	2019	7522892.56
12	2019	4830404.73
1	2020	4740600.16
2	2020	3996227.77
3	2020	378770.97
4	2020	395035.35
5	2020	783813.42
6	2020	1695216.60
7	2020	2551159.16
8	2020	2786648.26
9	2020	12353509.79
10	2020	13218636.20
11	2020	20464999.10
12	2020	12944659.65
1	2021	12399392.98
2	2021	10129735.57
3	2021	12144061.25
4	2021	7311999.95
5	2021	12150225.01
6	2021	9824521.01
7	2021	12092346.32
8	2021	7178707.59





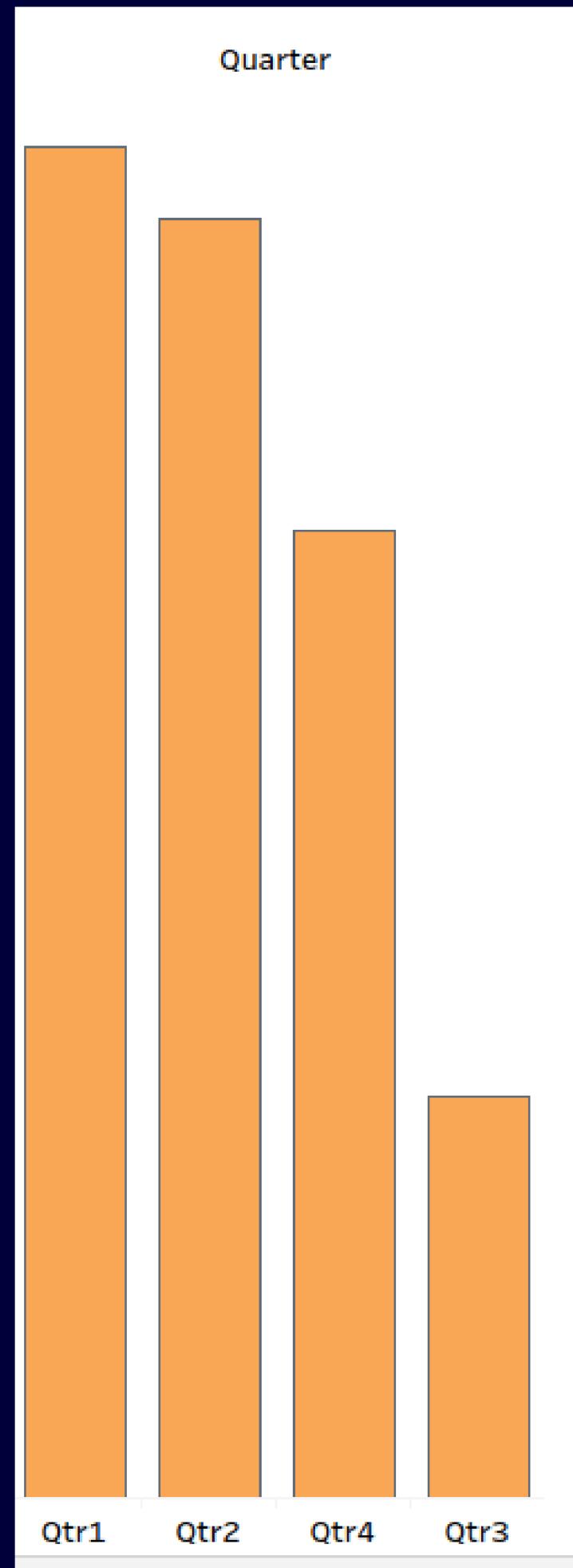


Request-8

Total_sold_quantity by quarter in year 2020

```
select
    case when month(date) in (9,10,11) then 'Qtr1'
        when month(date) in(12,1,2) then 'Qtr2'
        when month(date) in(3,4,5) then 'Qtr3'
        when month(date) in(6,7,8) then 'Qtr4'
    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
```





In year 2020 Quarter-1 have highest number of sold_quantity while Quarter-3 been a lowest sold_quantity

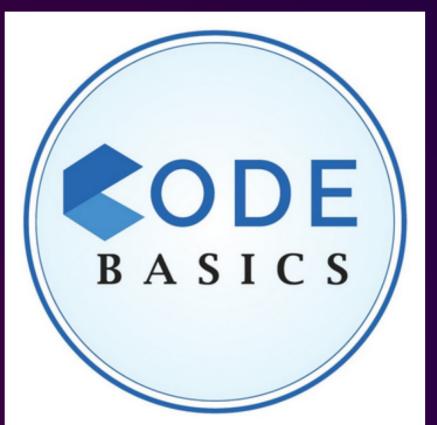


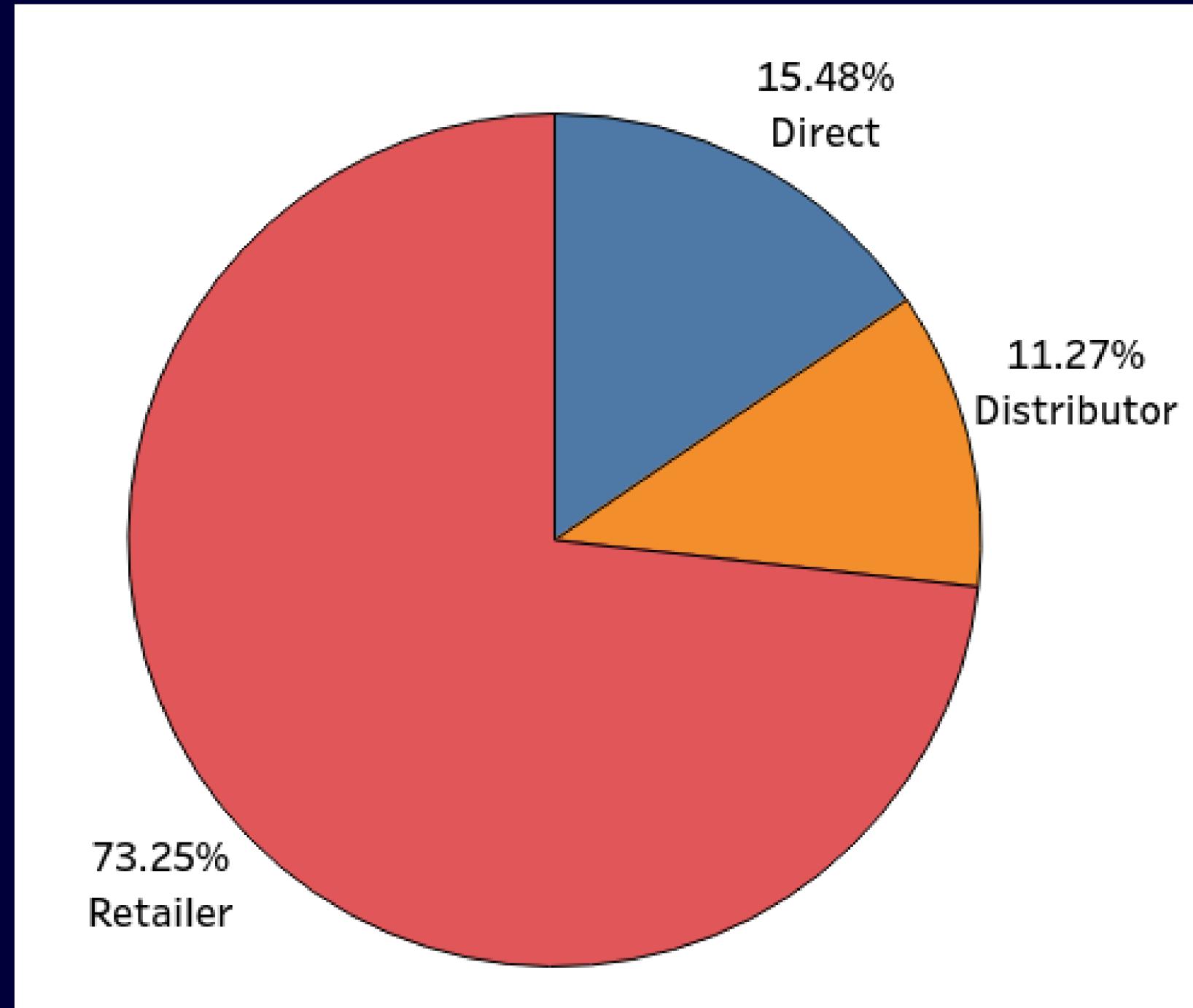
Request-9

Gross sales per channel
in 2021

```
with gross_sales as(
    select channel,
    round((sum(m.sold_quantity*p.gross_price)/1000000),2) as gross_sales_mln
    from dim_customer c
    join fact_sales_monthly m
    using (customer_code)
    join fact_gross_price p
    using (product_code, fiscal_year)
    where fiscal_year = 2021
    group by channel)

select *, gross_sales_mln*100/sum(gross_sales_mln) over() as percentage
from gross_sales
```





channel	gross_sales_mln	percentage
Direct	257.53	15.48%
Retailer	1219.08	73.25%
Distributor	188.03	11.27%

Retail channel contribute (73%)
maximum gross-sales in 2021

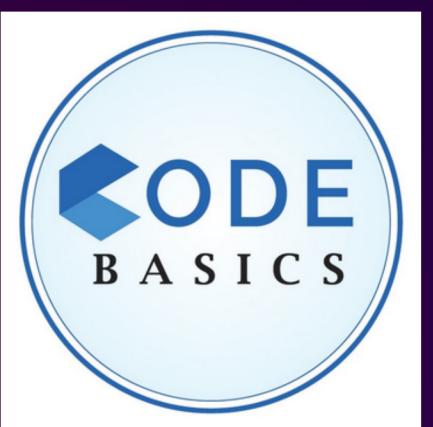


Request-10

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

```
with top_products as(
    select division, product_code, product,
    sum(sold_quantity) as total_sold_quantity,
    rank() over(partition by division order by sum(sold_quantity) desc) as rank_order
    from dim_product
    join fact_sales_monthly
    using (product_code)
    where fiscal_year = 2021
    group by 1,2,3)

select * from top_products
where rank_order < 4
```



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

List of top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021.

- PC division have less total_sold_qty then other division.
- Pen drive is most sold product from all divisions.

THANKYOU

AKSHIT SINGHAL