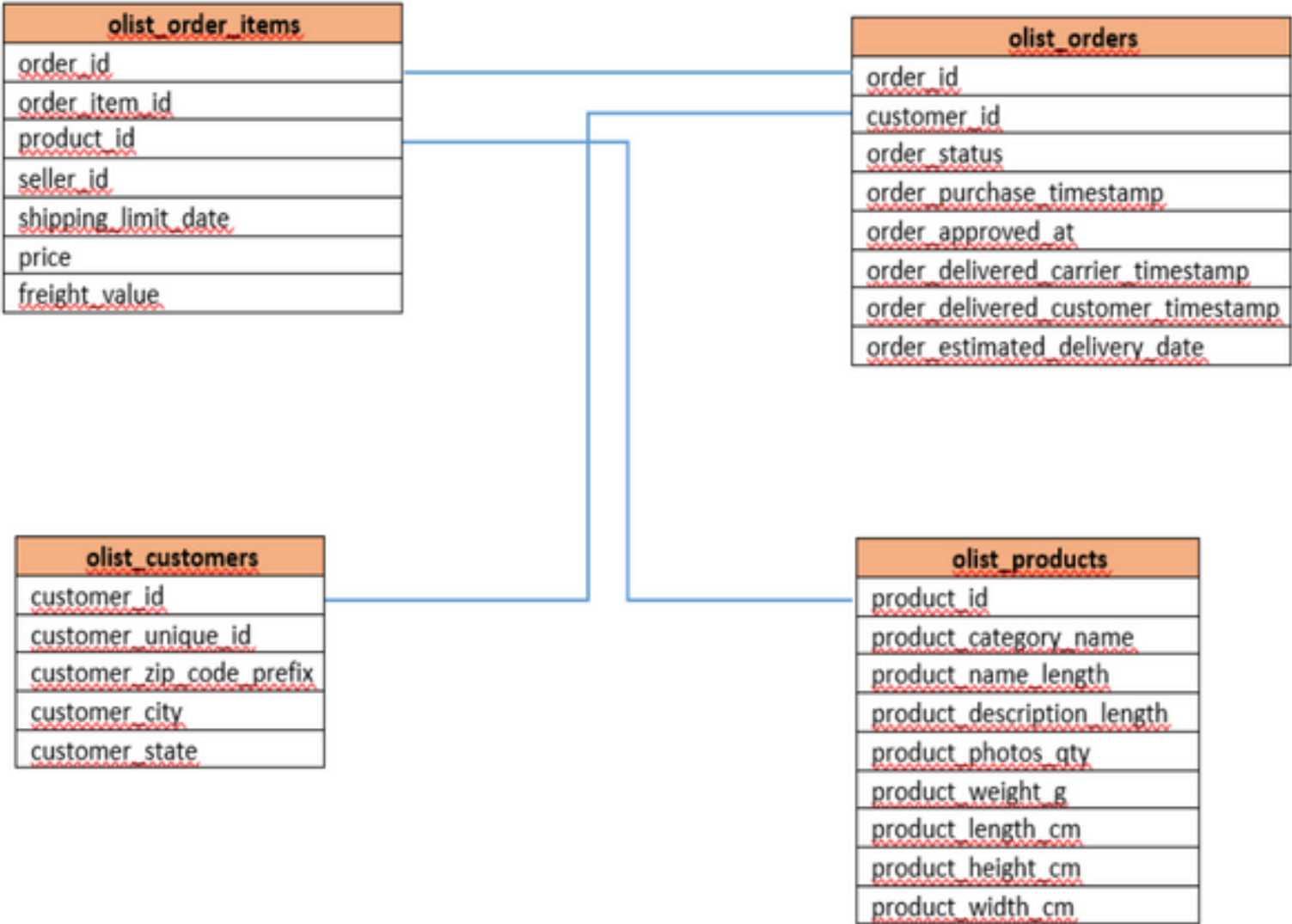# *PROJECT 1*

INTRODUCTION

From the store data that has been obtained, an analysis will be carried out to see overall performance by year and also by product sub-category, pay attention to effectiveness and sales by year and also by product sub-category, see customer behavior and growth from the customer side

DATABASE RELATIONSHIP TABLE

olist_order_items

order_id
order_item_id
product_id
seller_id
shipping_limit_date
price
freight_value

olist_orders

order_id
customer_id
order_status
order_purchase_timestamp
order_approved_at
order_delivered_carrier_timestamp
order_delivered_customer_timestamp
order_estimated_delivery_date

olist_customers

customer_id
customer_unique_id
customer_zip_code_prefix
customer_city
customer_state

olist_products

product_id
product_category_name
product_name_length
product_description_length
product_photos_qty
product_weight_g
product_length_cm
product_height_cm
product_width_cm

TOOLS

01

MySQL™

02

03

01 Query to understand *jumlah_order,total_price_sale* and *jumlah_customer* for everymonth, base on *order_status*

```sql
with table1 as (

select order_status,
       date_format(order_purchase_timestamp, '%M %Y') as bulan,
       count(distinct order_id) as jumlah_order,
       sum(price) as total_price_sale,
       count(distinct customer_unique_id) as jumlah_customer
from   olist_orders inner join olist_order_items using(order_id)
                    inner join olist_customers using (customer_id)
group by 1,2
)
select *
from table1
```

REPORT

TREND OF CUSTOMER

TOTAL PRICE

SUM OF ORDER & CUSTOMER base 'Order_Status'

- The customer trend tends to increase from December 2016 to September 2018

- Total_price tends to be stable from december 2016 to aug 2017, and has increased drastically in sep 2017 after that in aug 2017 it fell back to the average price like the previous month

- Based on *order_status, sum_of_orders* and *sum_of_customer* are directly proportional

Query to understand AOV (Avarage_Order_Value),frequency, and total Unique_Customer where orser_status is "delivered"

```sql
with table1 as (
    select
    date_format(order_purchase_timestamp, '%M %Y') as bulan,
    round(count(distinct order_id)/count(distinct customer_id),0) as frequency,
    sum(price) / count(distinct order_id) as Avarage_Order_Value,
    count(distinct customer_unique_id) as Unique_Customer

    from olist_orders inner join olist_order_items using(order_id)
                      inner join olist_customers using (customer_id)
where order_status = 'delivered'
group by 1
order by 1
    )
    select *
    from table1
```

REPORT
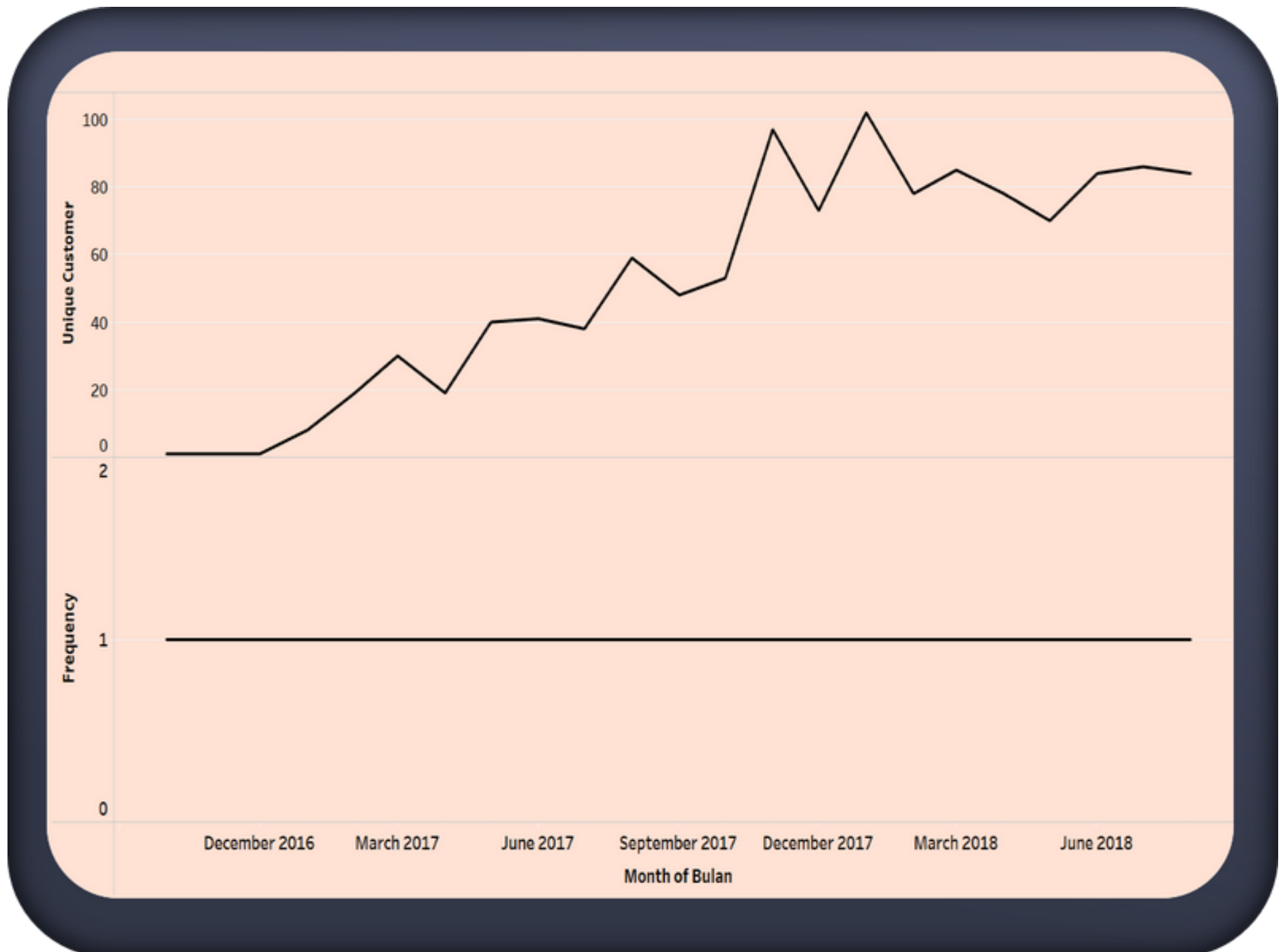
Sales frequency is directly proportional to the number of unique customers
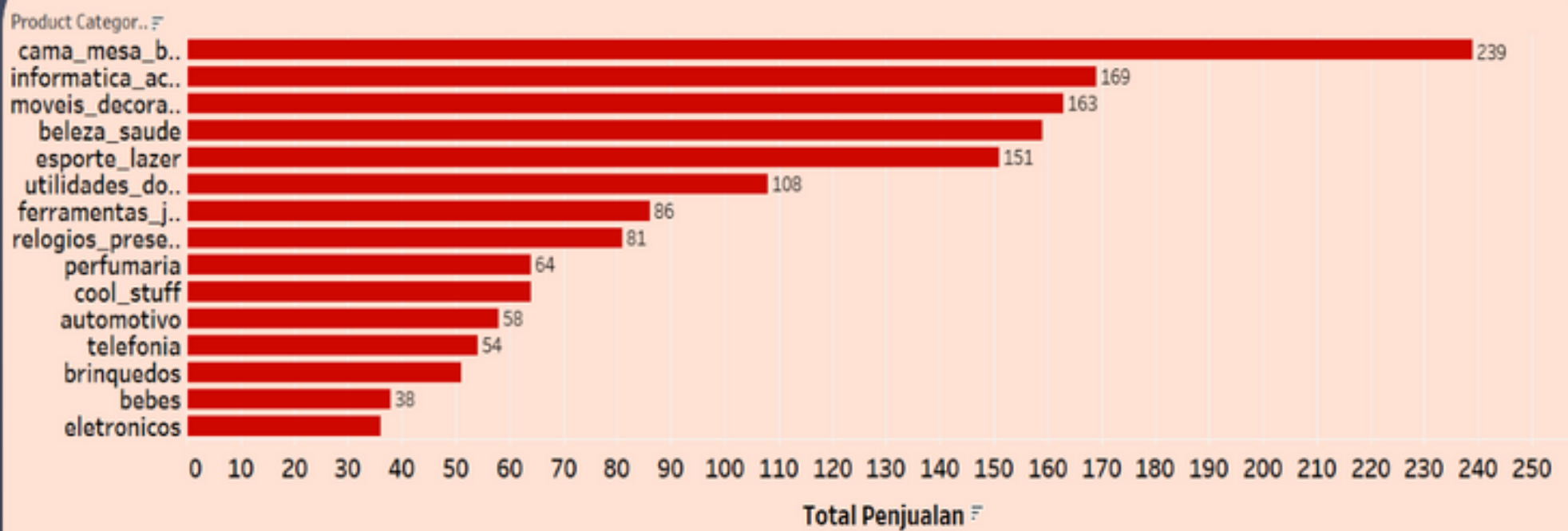
03 Query to understand biggest seller by category

```
with table3 as (

    select product_category_name, sum(order_item_id) as total_penjualan
    from olist_products inner join olist_order_items using (product_id)
    group by 1
    order by 2 desc
)
select *
from table3
```
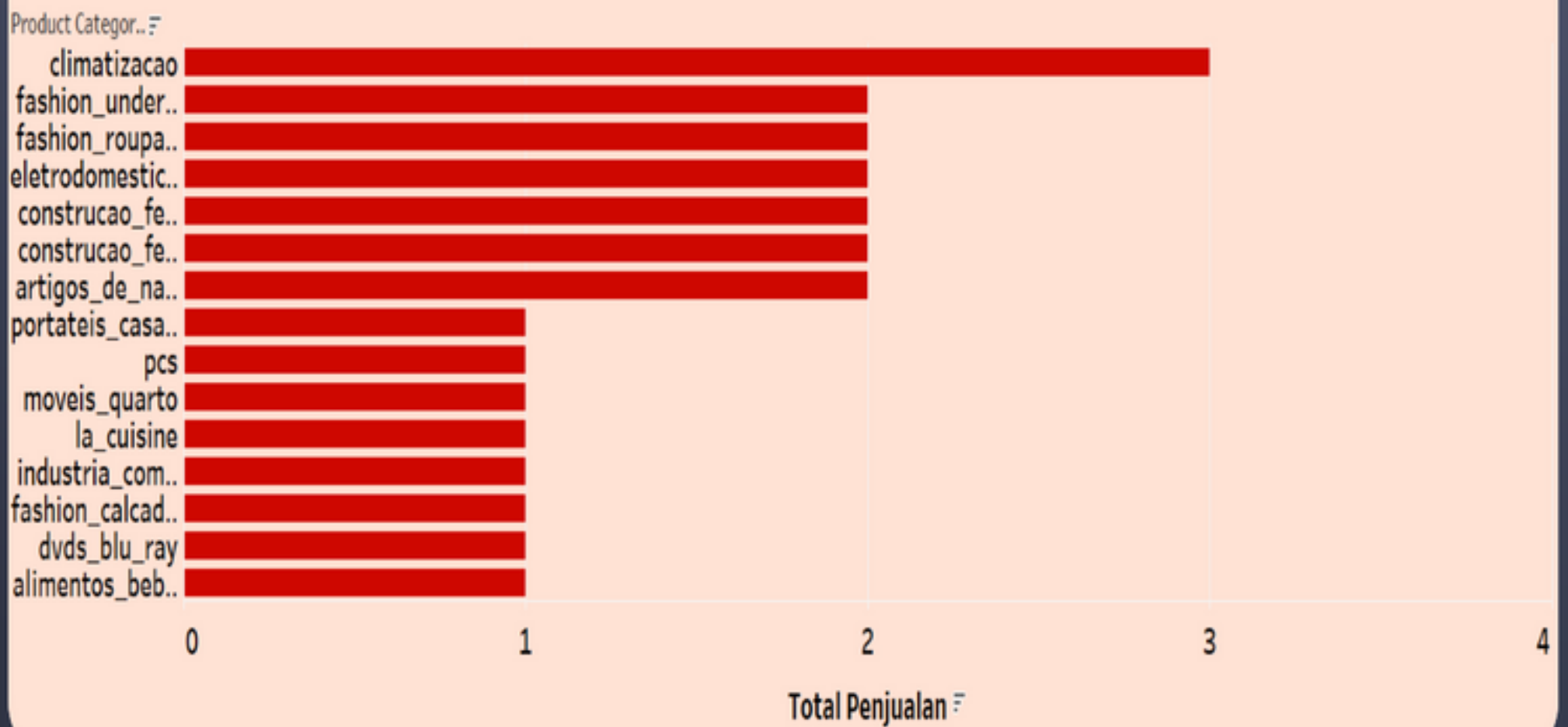
REPORT

Top 15 Number of Category Sales

Product Categor..

Category	Total Penjualan
cama_mesa_b..	239
informatica_ac..	169
moveis_decora..	163
beleza_saude	
esporte_lazer	151
utilidades_do..	108
ferramentas_j..	86
relogios_prese..	81
perfumaria	64
cool_stuff	
automotivo	58
telefonia	54
brinquedos	
bebes	38
eletronicos	

Total Penjualan

- Product cama_mesa_banho have the most from Dec 2016 to Sep 2018

Bottom 15 Number of Category Sales

- Some product had the least sales from Dec 2016 to Sep 2018

CONCLUSION & RECOMENDATION

1. Trend Analysis: keep monitoring customer trends to identify reasons behind increases till September 2018. This can help in planning a more effective marketing strategy. an example of a solution that can be used is a loyalty program, which provides incentives for customers to keep shopping at your store.

2. Availability of stock: Relate the increase in the frequency of sales to the need to ensure adequate inventory. Make sure you can cope with the increasing demands.

3. Price Management: Review the September 2017 spike in prices and their decline. Consider optimizing your pricing strategy to stay attractive to customers without compromising sales stability.

CONCLUSION & RECOMENDATION

4. Increased Orders: Based on the direct relationship between the number of customers and orders, focus on strategies that encourage customers to place more orders.improve customer retention. because satisfied customers are more likely to shop again. Provide good service, respond quickly to questions or concerns, and consider developing a loyalty program.

5. Product Portfolio: Evaluation of sales of top 5 and bottom 5 products. First identify the reasons why the five types of products have the most sales. You might be able to stick to the top 5 products, and could add to those product categories based on the reasons why they have the most sales, while evaluating the bottom products that are selling less.

6. Deeper Analysis: Continue to perform deeper analysis of sales data, perhaps using methods such as regression analysis or customer segmentation, to identify more detailed patterns and opportunities