PORTOFOLIO
DATA ANALYST

REYHAN TERRA
DIFFA

HI, MY NAME IS REYHAN TERRA DIFFA

I am a numbers person. I can read spreadsheets and data easily and welcome challenges. Besides collecting data, I also use it to tell stories. As a data storyteller, I use data information to help companies solve problems, improve process performance, and plan the next business steps.

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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

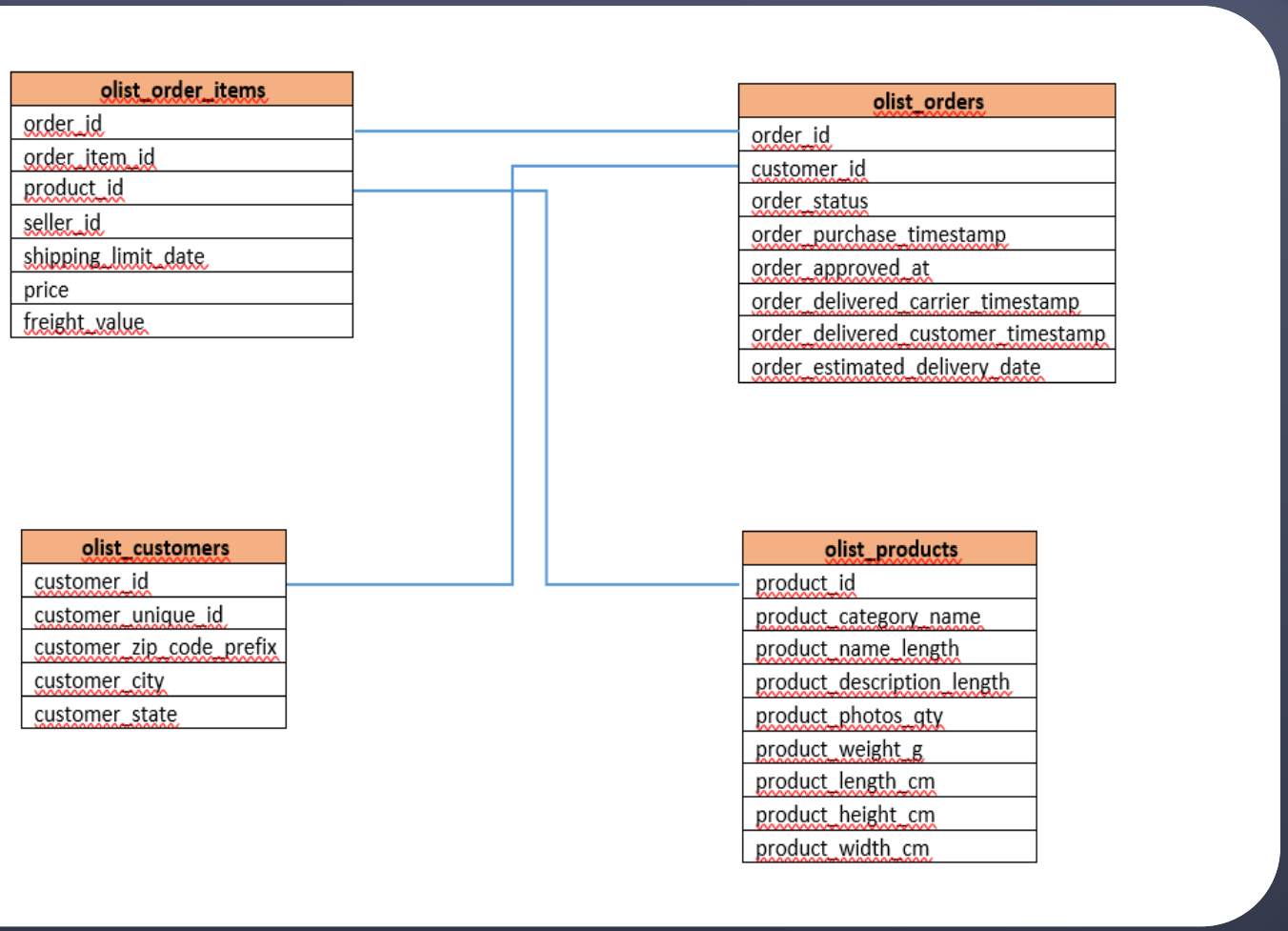
PROJECT 1

TOOLS

01

02

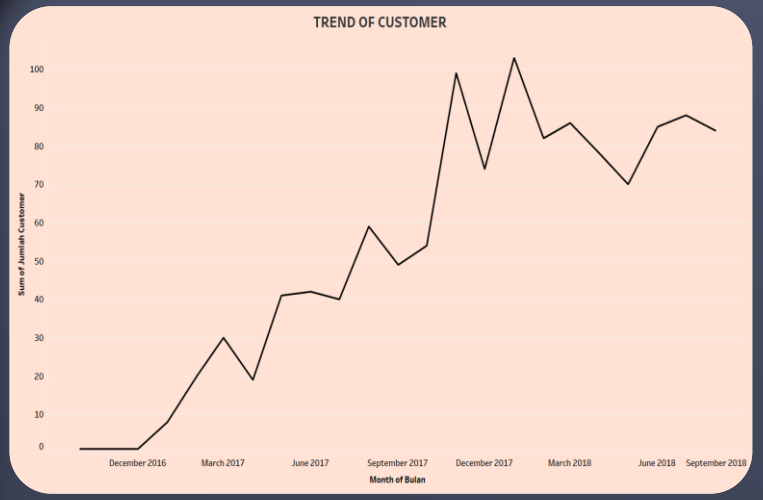
DATABASE RELATIONSHIP TABLE

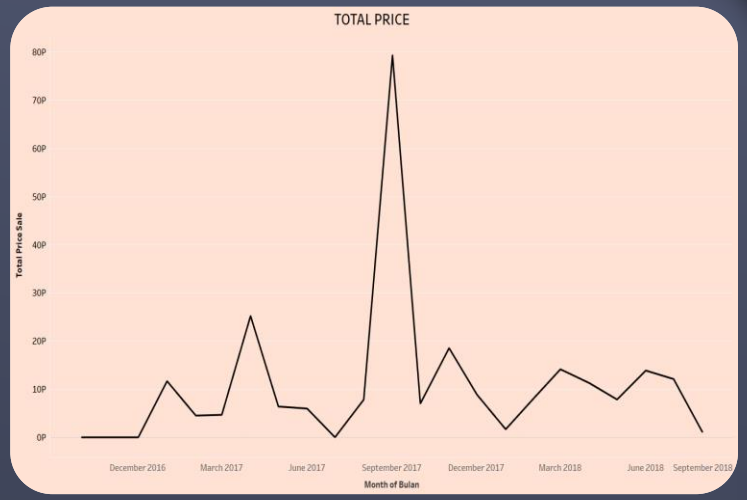


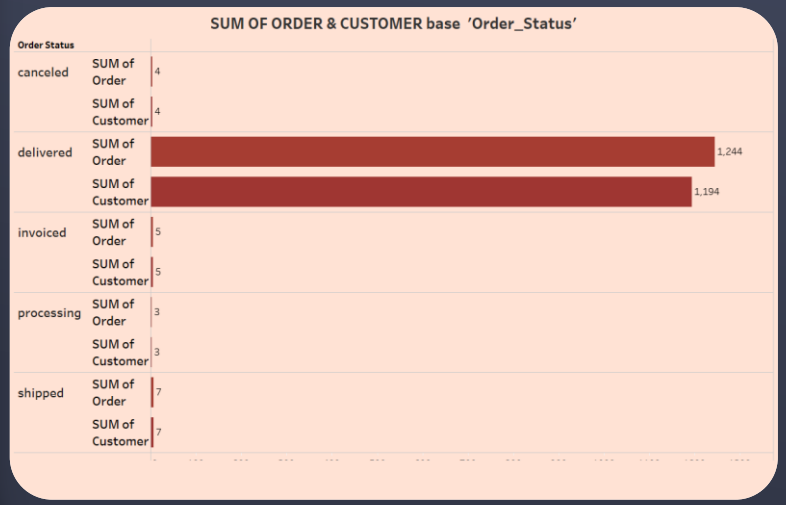
01

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
```





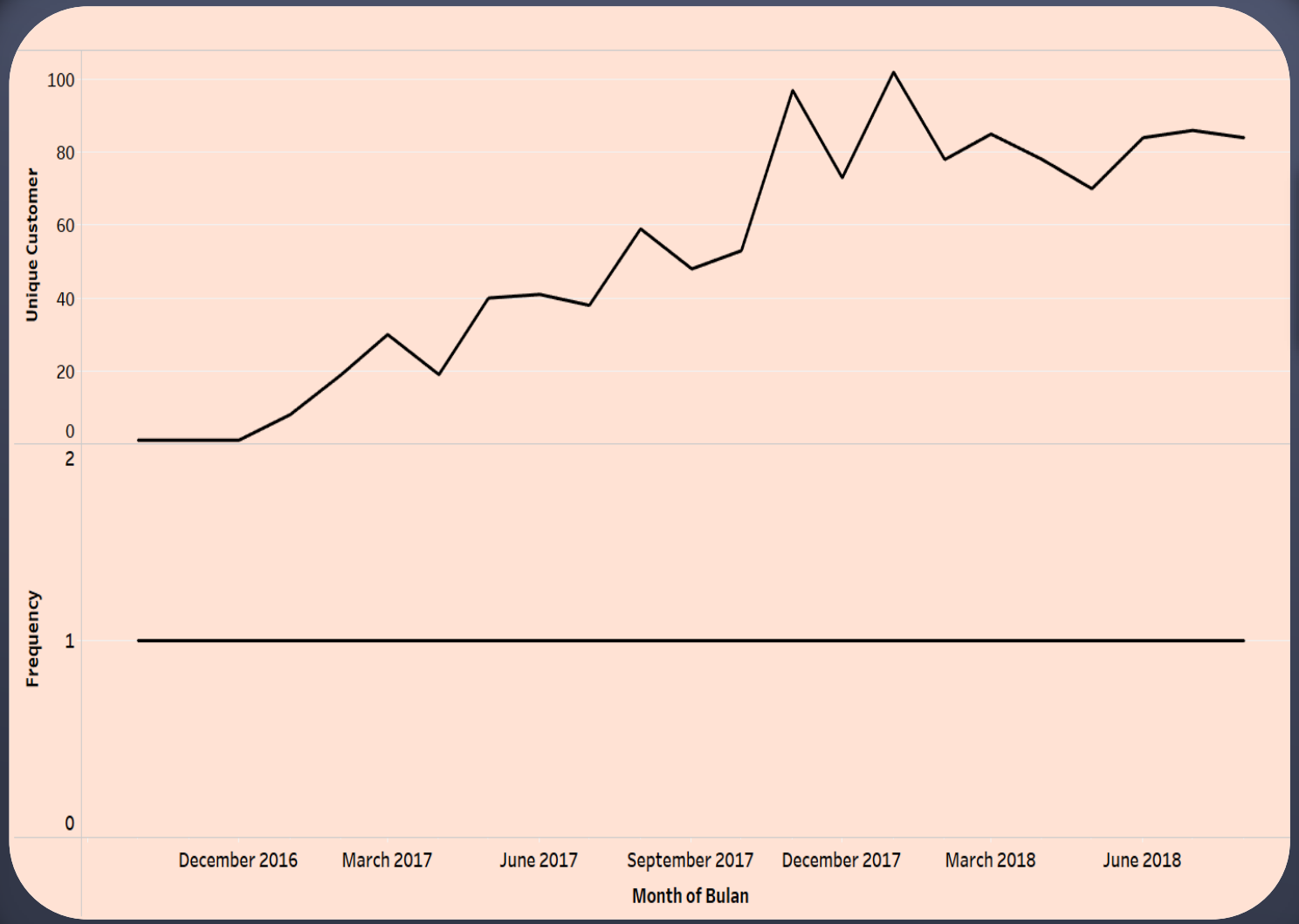


- The customer trend tends to increase from December 2016 to September 2018
- Total_price tends to be stable from december 2016 to aug 2017, and has increased drastically in sep 2017 after that in aug 2017 it fell back to the average price like the previous month
- Based on *order_status, sum_of_orders* and *sum_of_customer* are directly proportional

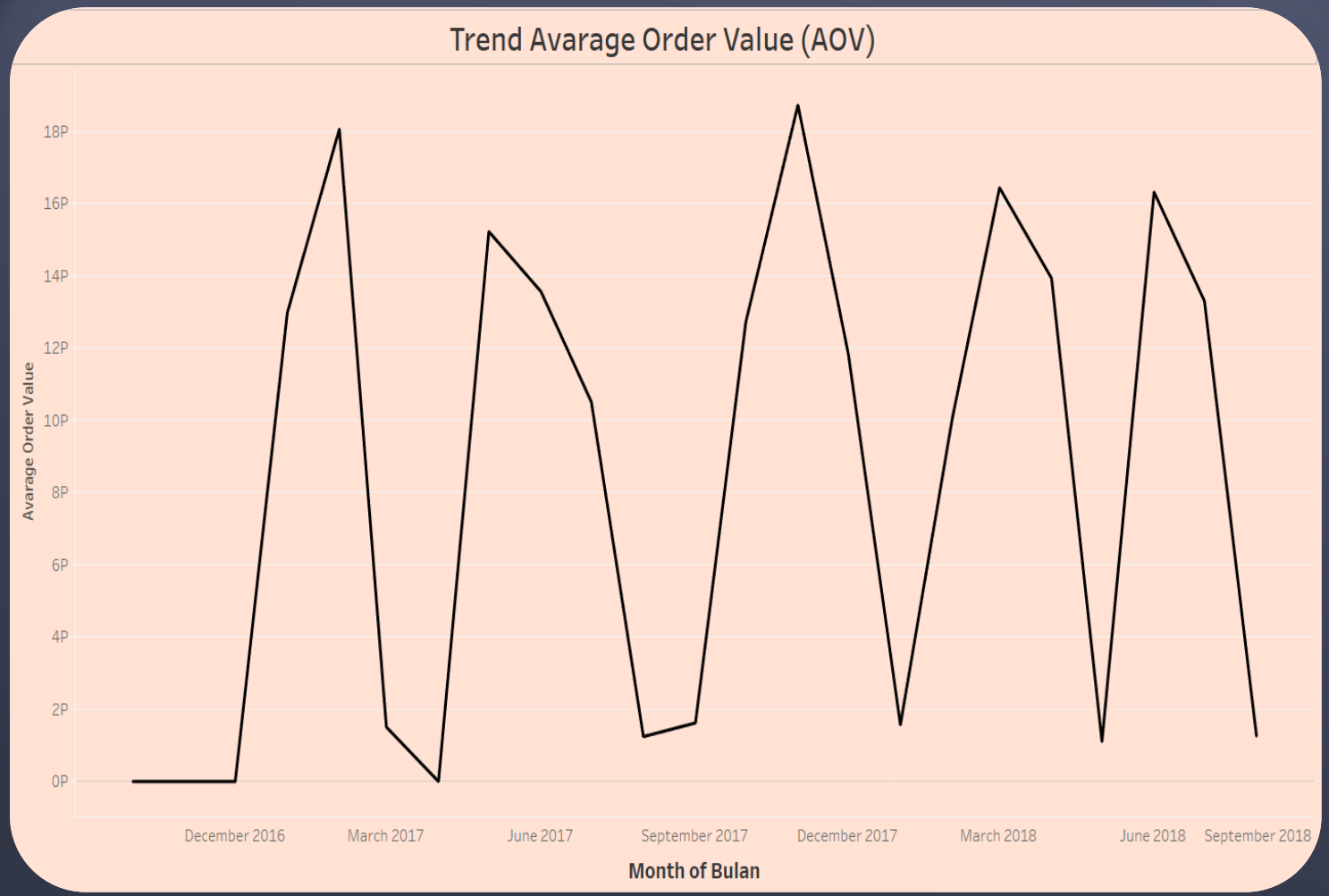
02

Query to understand AVO *(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
```



- Sales frequency is directly proportional to the number of unique customers

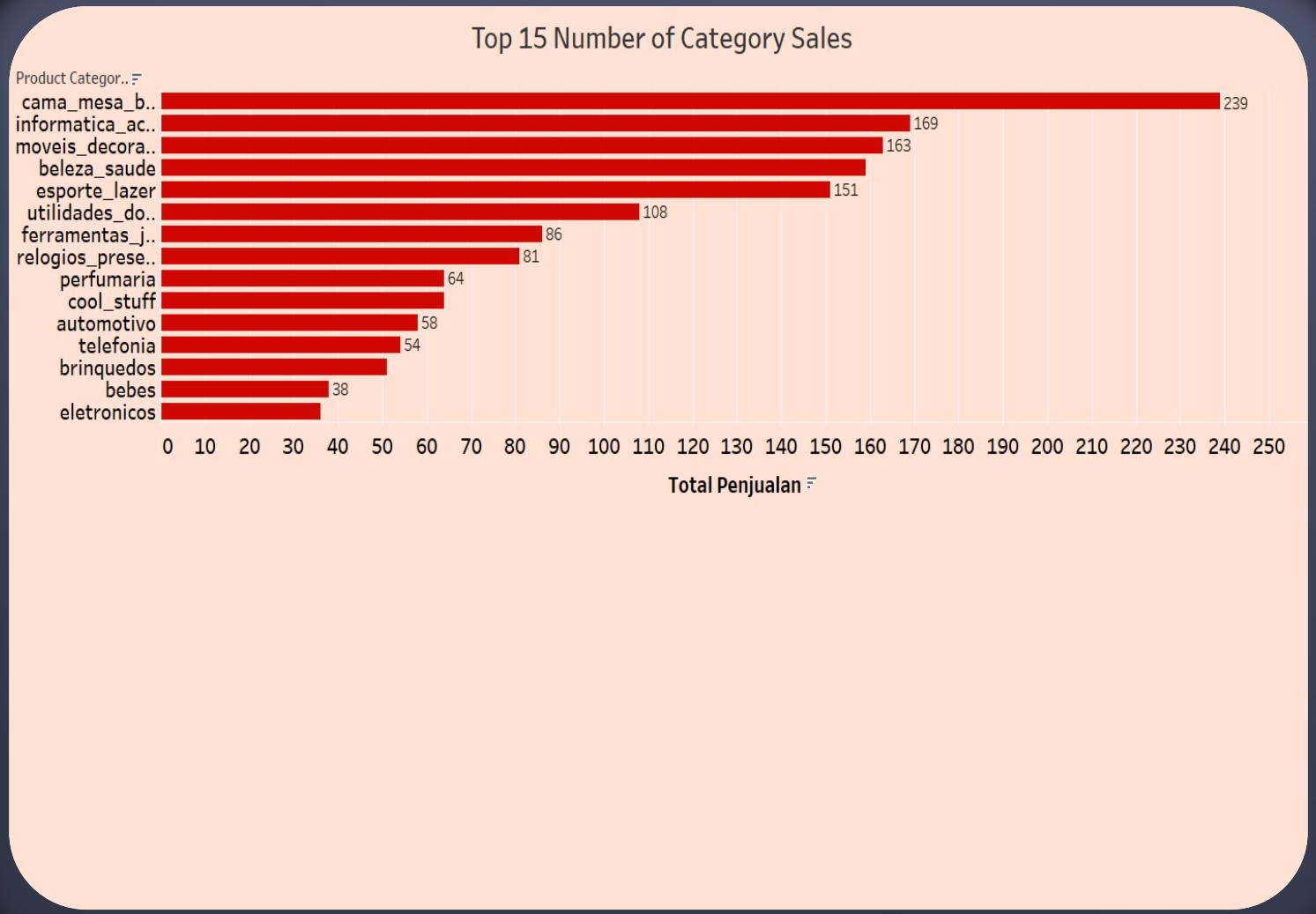


- The Average Order Value (AOV) trend in the data shows a seasonal pattern

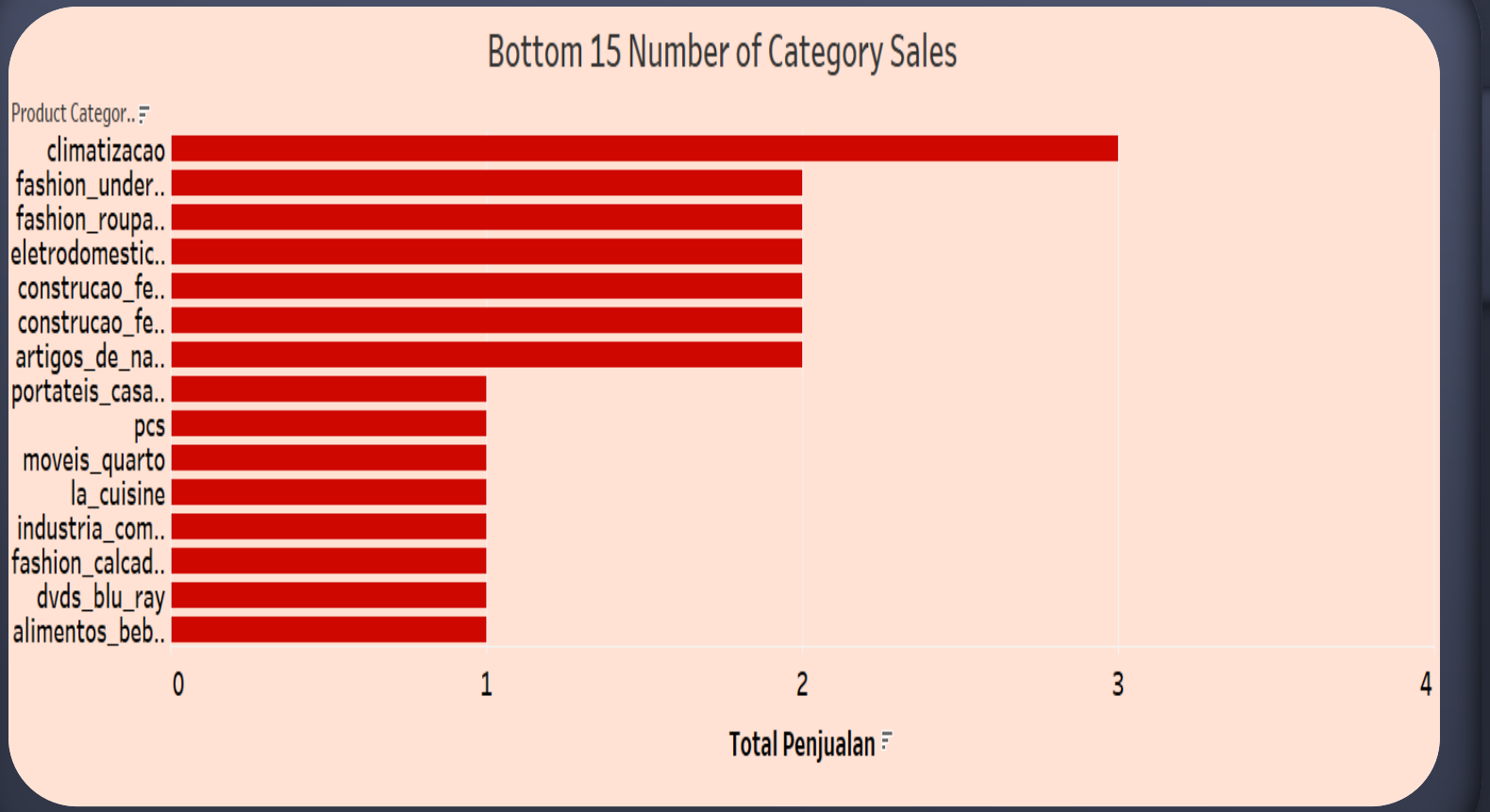
02

Query to understand biggest seller by category

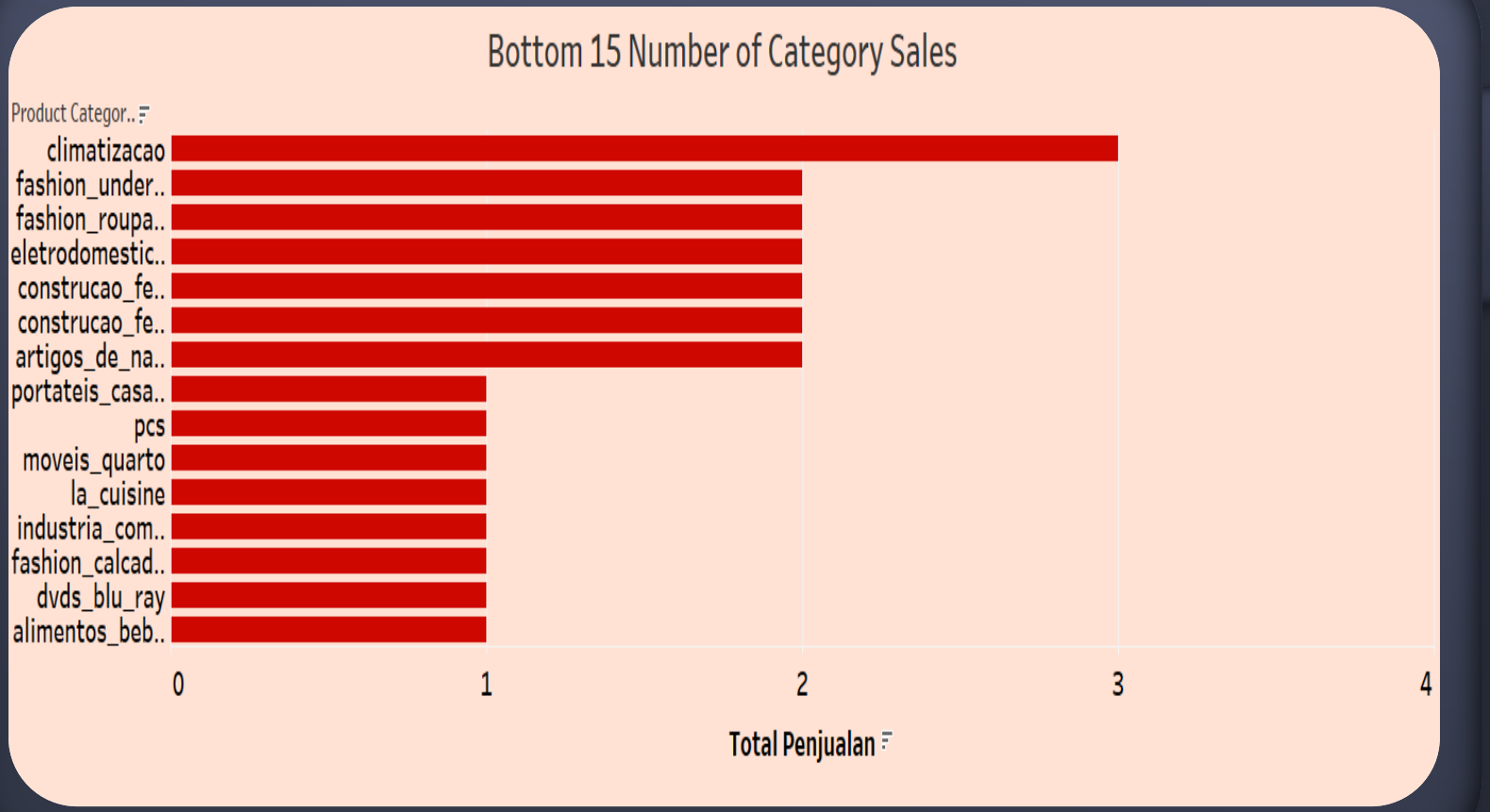
```sql
with table3 as (

    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
```



Product cama_mesa_banho have the most from Dec 2016 to Sep 2018



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



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

CONCLUSION AND RECOMMENDATION

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. 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.

3. 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.

4. The Average Order Value (AOV) trend in the data shows a seasonal pattern with an increase at the beginning and end of the year, and a decrease in the middle of the year. There are also significant outliers in October 2016 that need to be investigated. Despite fluctuations, overall AOV tends to increase year over year, indicating an increase in average order value from customers. It is important to focus on strategies to overcome the sharp AOV decline in May 2018 and understand the factors that may have influenced the trend.

CONCLUSION AND RECOMMENDATION

5. 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.

6. 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.

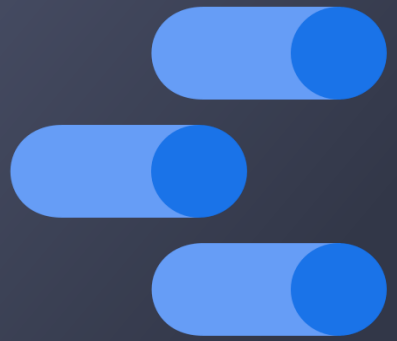
7. Deeper Analysis: Continue to perform deeper analysis of sales data, perhaps using methods such as regression analysis or customer segmentation, to identify more detailed patterns and opportunities

PROJECT 2

TOOLS

01

02



```sql
WITH pizza_orders_cte AS (
  -- Menggabungkan tabel "orders" dengan "order_details" berdasarkan order_id
  SELECT o.order_id, o.date, o.time, od.order_details_id, od.pizza_id, od.quantity
  FROM orders o
  INNER JOIN order_details od ON o.order_id = od.order_id
),

pizza_details_cte AS (
  -- Menggabungkan tabel "pizza_orders_cte" dengan "pizzas" berdasarkan pizza_id
  SELECT poc.order_id, poc.date, poc.time, poc.order_details_id, poc.pizza_id, poc.quantity,
p.pizza_type_id, p.size, p.price
  FROM pizza_orders_cte poc
  INNER JOIN pizzas p ON poc.pizza_id = p.pizza_id
),

pizza_types_cte AS (
  -- Menggabungkan tabel "pizza_details_cte" dengan "pizza_types" berdasarkan pizza_type_id
  SELECT pdc.order_id, pdc.date, pdc.time, pdc.order_details_id, pdc.pizza_id, pdc.quantity,
pdc.pizza_type_id, pdc.size, pdc.price, pt.name, pt.category,
  (pdc.quantity * pdc.price) AS total_price
  FROM pizza_details_cte pdc
  INNER JOIN pizza_types pt ON pdc.pizza_type_id = pt.pizza_type_id
)

-- Mengambil semua data yang telah digabungkan dalam CTE terakhir (pizza_types_cte)
SELECT *,
CASE
        WHEN EXTRACT(HOUR FROM time) >= 5 AND EXTRACT(HOUR FROM time) < 12 THEN 'Morning'
        WHEN EXTRACT(HOUR FROM time) >= 12 AND EXTRACT(HOUR FROM time) < 18 THEN 'Afternoon'
        ELSE 'Evening'
      END AS time_category
FROM pizza_types_cte
WHERE order_id IS NOT NULL
```

SALES PERFORMANCE ANALYSIS

Month | Category | Size

Total Sales
817.860,05

TOP Of Product

	Name	Quantity	Total Price
1.	The Thai Chicken Pizza	2.371	43.434,25
2.	The Barbecue Chicken Pizza	2.432	42.768
3.	The California Chicken Pizza	2.370	41.409,5
4.	The Classic Deluxe Pizza	2.453	38.180,5
5.	The Spicy Italian Pizza	1.924	34.831,25
6.	The Southwest Chicken Pizza	1.917	34.705,75
7.	The Italian Supreme Pizza	1.884	33.476,75

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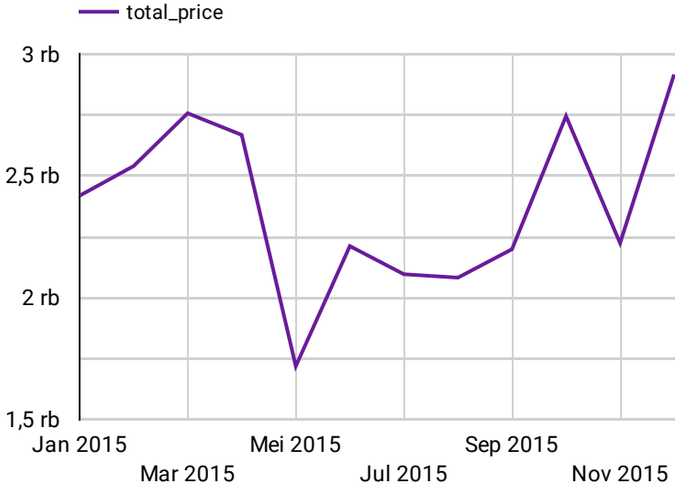
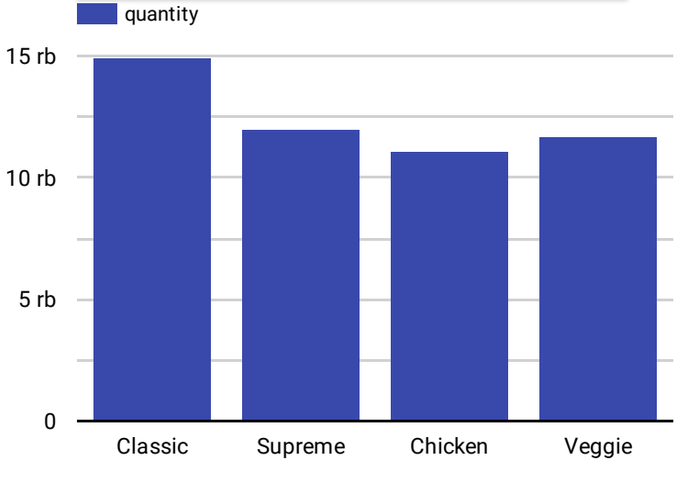
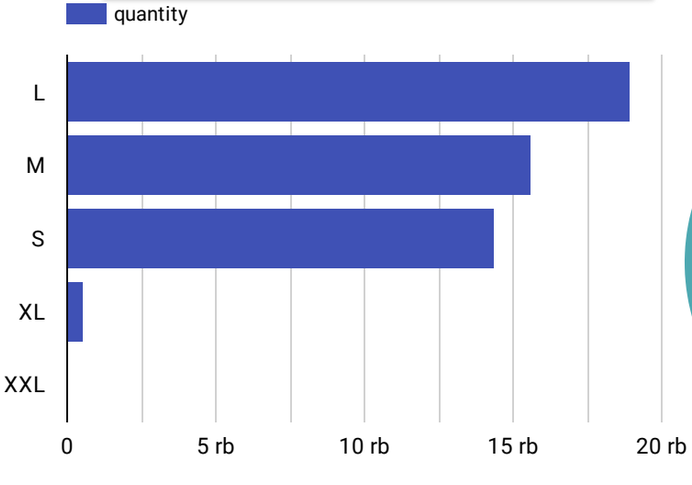
Trend Of Sales



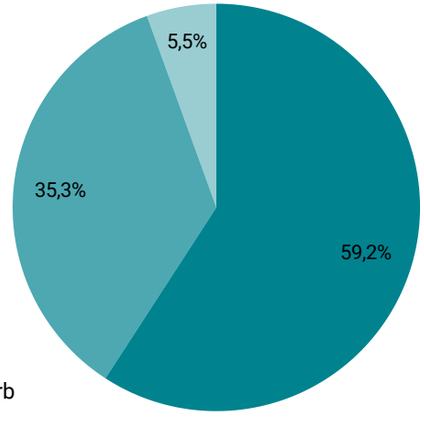
TOP Category by Quantity Order



TOP Size by Quantity Order



Persentage Of Order Time



Morning: 5 - 12 AM
Afternoon: 12-18 PM
Evening: 18-5 AM

PROJECT 3

TOOLS

01

02

Business Perfomance Dashboard

SUM OF SALES

$276,711,084

SUM OF PROFIT

$489,177,263.3174002

Filter by Y...

- [x] Select all
- [ ] 2011
- [ ] 2012
- [ ] 2013

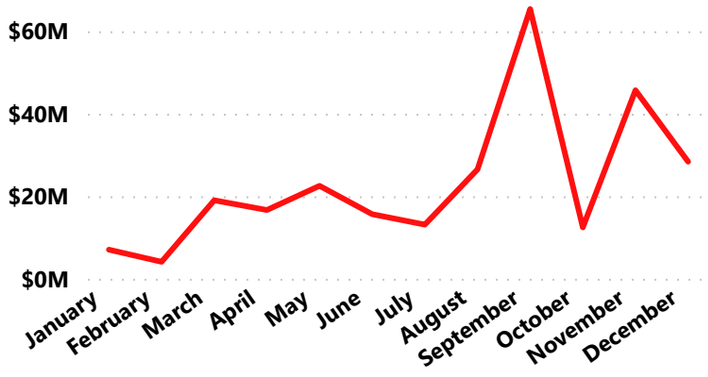
Filter by Region

- [ ] Select all
- [ ] Central
- [ ] East
- [ ] South

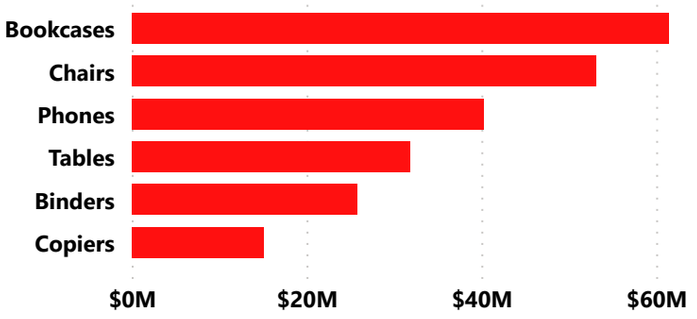
Filter bySegment

- [ ] Select all
- [ ] Consumer
- [ ] Corporate
- [ ] Home Office

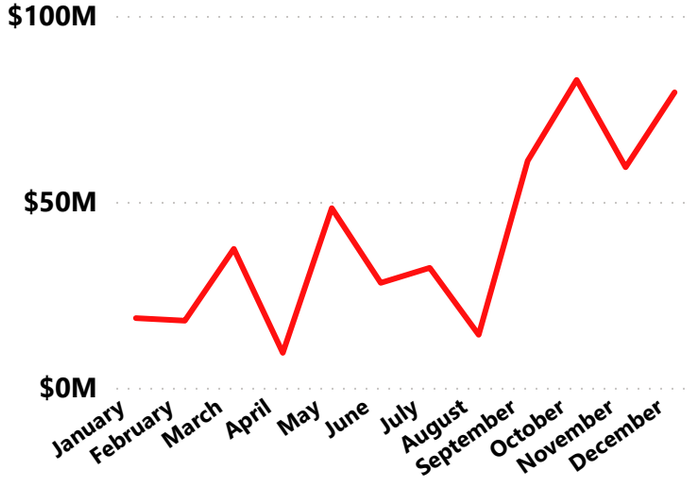
Sum of Sales by Month



Sum of Sales by Sub-Category



Sum of Profit by Month



Sum of Sales by City

Sub-Category	Sum of Quantity	Revenue	GPM (%)
Bookcases	197	319,431,085.73	0.70%
Chairs	614	241,645,006.66	8.58%
Phones	815	212,763,291.23	30.54%
Tables	346	164,669,405.68	-14.01%
Binders	1593	105,954,923.37	42.49%
Storage	804	56,724,848.86	67.53%
Copiers	69	55,873,781.45	148.74%
Accessories	670	31,228,202.99	176.77%
Machines	129	30,349,409.52	176.79%
Furnishings	1036	20,298,907.34	145.67%
Paper	1367	20,274,491.77	291.60%
Appliances	396	18,078,911.97	216.44%
Supplies	216	17,303,157.82	-44.93%
Labels	363	6,404,034.52	130.64%
Art	673	5,025,428.20	168.78%
Envelopes	222	3,020,321.23	343.77%
Fasteners	288	1,773,726.47	97.43%
Total	**9798**	**1,310,818,934.81**	**37.32%**