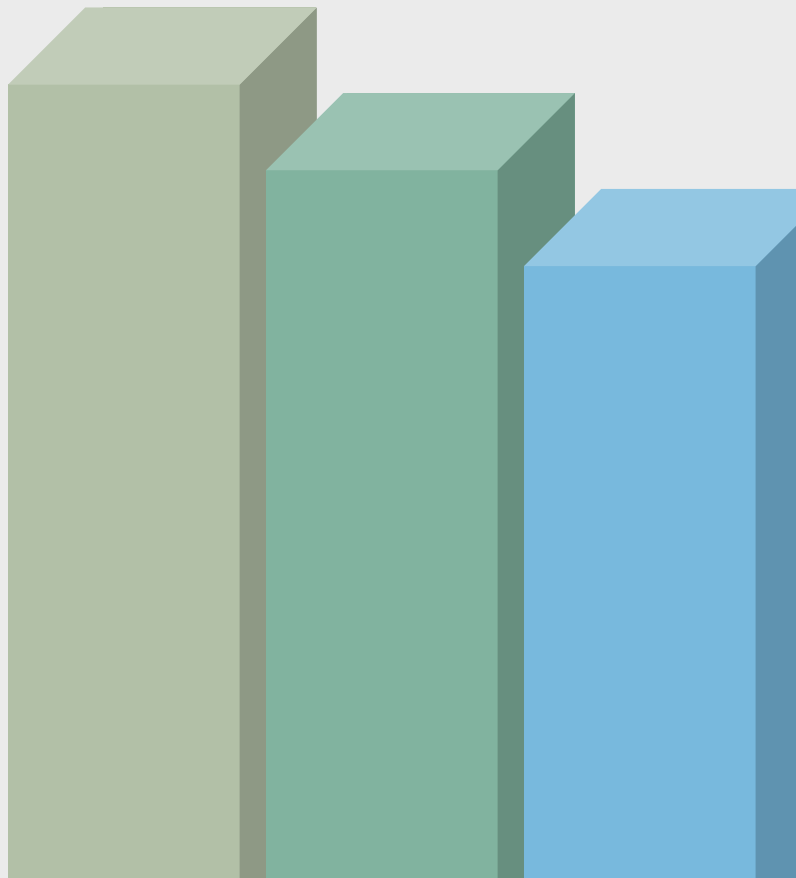


# Analyzing eCommerce Business Performance with SQL

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# OUTLINE

01



**Data  
Preparation**

02



**Customer  
Growth**

03



**Product  
Quality**

04



**Payment  
Method**

# OVERVIEW

Measuring business performance is crucial in an e-commerce company. Track, monitor, and assess various business processes successes or failures of several business processes.

Therefore, in this report, I will analyze the business performance of an e-Commerce company, considering several business metrics, customer growth, product quality, and payment types.

The dataset is a transaction history of one of the biggest marketplaces in South America from September 2016 to October 2018.



# DATA PREPARATION

The dataset contain eight tables that have a relationship with each other, as shown beside. There are several step in this stage:

## 1. Create tables:

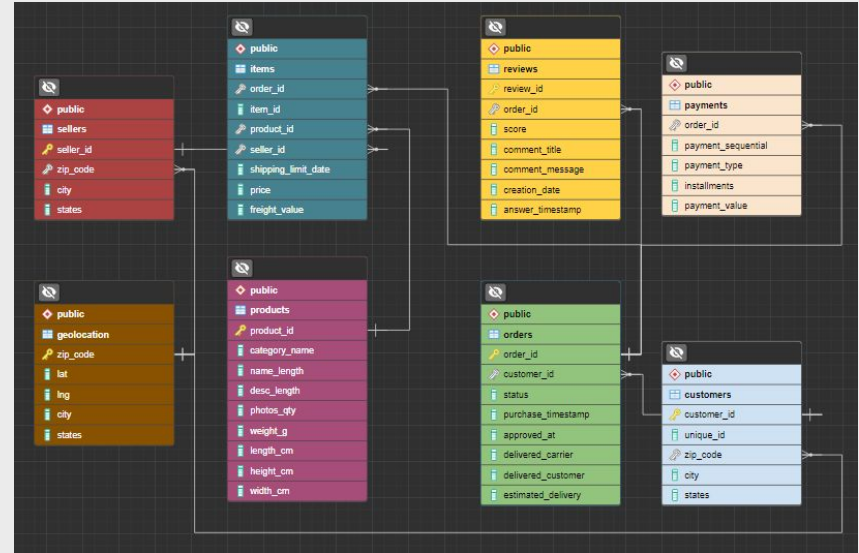
Using Create statement to create table then set the data type and constraint for each column

## 2. Import dataset:

- **Create temporary table**, use Copy statement to import the to the temporary table
- **Remove duplicate data**, use Select Distinct statement for the primary key column
- **Remove missing values**, join table with foreign key column to the parent table with primary key
- **Insert data to the actual table**, use Insert statement to to move the data to the actual table

## 3. Generate ERD

## Entity Relationship Diagram



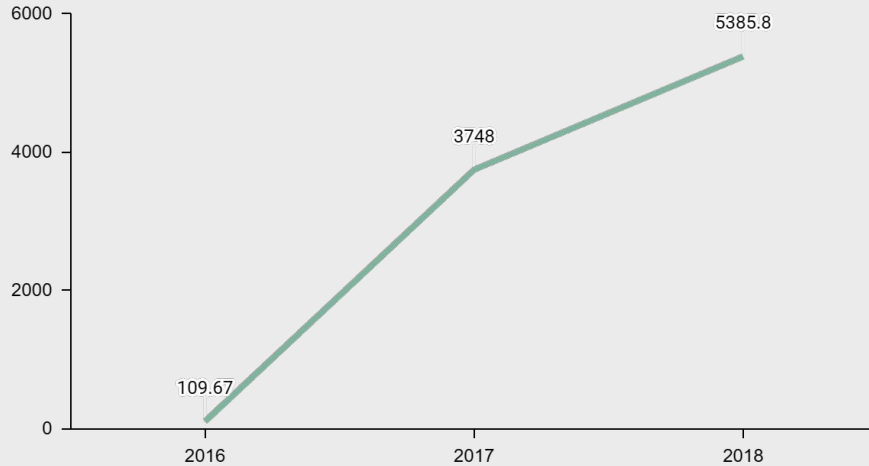
# ANNUAL CUSTOMER ACTIVITY GROWTH

Year	Average MAU	New Customers	Repeat Order	Average Order
2016	109.67	329	3	1.01
2017	3748.00	44976	1252	1.03
2018	5385.80	53858	1163	1.02

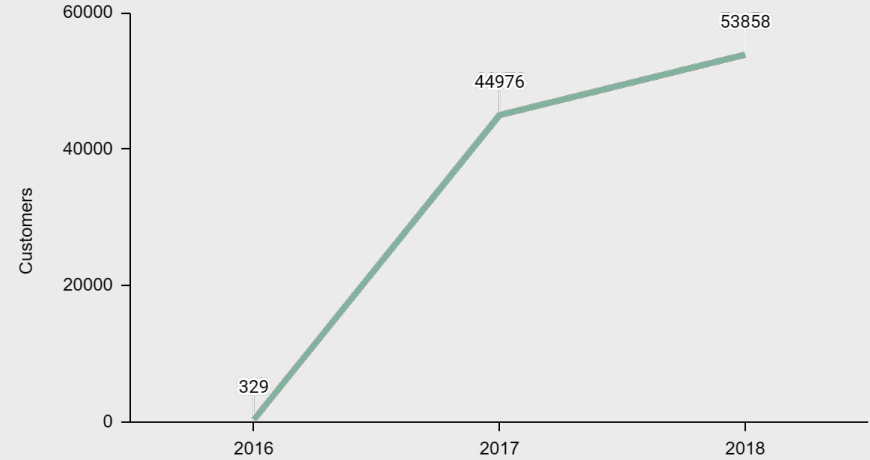
MAU: Monthly Active User

# ANNUAL CUSTOMER ACTIVITY GROWTH

Average Monthly Active User



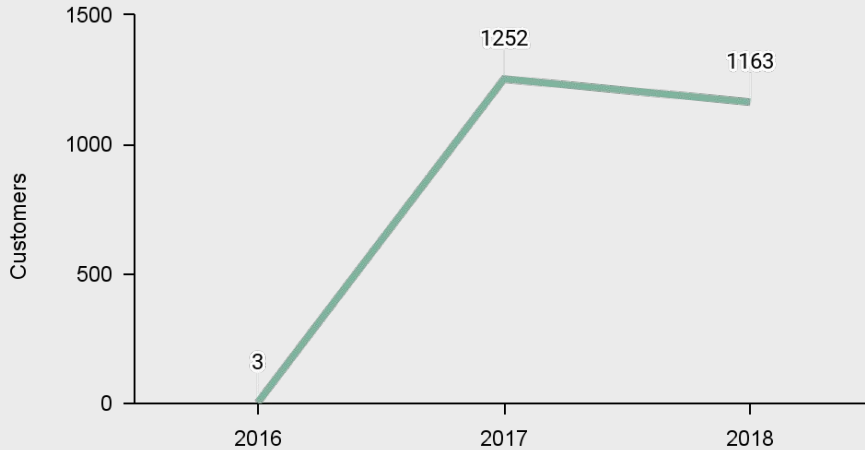
Total New Customers



The chart shows both **Monthly Active Users** and **Customers** increased. Moreover, there has been significant growth from 2016 to 2017. It turns out it was caused by the data collected from September 2016. If it's compared with a full year of data, it will lead to a big difference.

# ANNUAL CUSTOMER ACTIVITY GROWTH

## Total Customer Repeat Orders



## Average Number of Orders



On the other hand, the number of customers who do repeat orders decreased, which means most customers are one-time buyers. However, the average orders each year are similar.

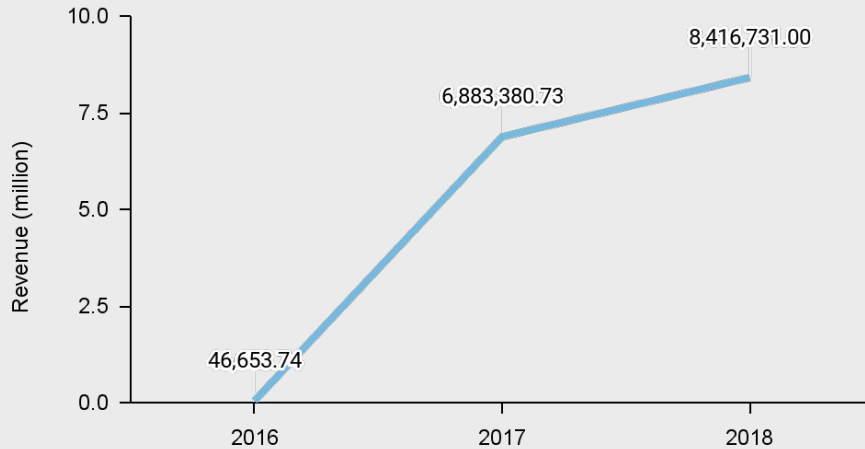
# ANNUAL PRODUCT CATEGORY QUALITY ANALYSIS

Year	Highest Revenue Category	Category Revenue	Total Revenue	Most Canceled Category	Number of Cancel	Total Cancel Order
2016	furniture_decor	6899.35	46653.74	toys	3	26
2017	bed_bath_table	580273.67	6883380.73	sports_leisure	25	263
2018	health_beauty	865001.74	8416731	health_beauty	27	334

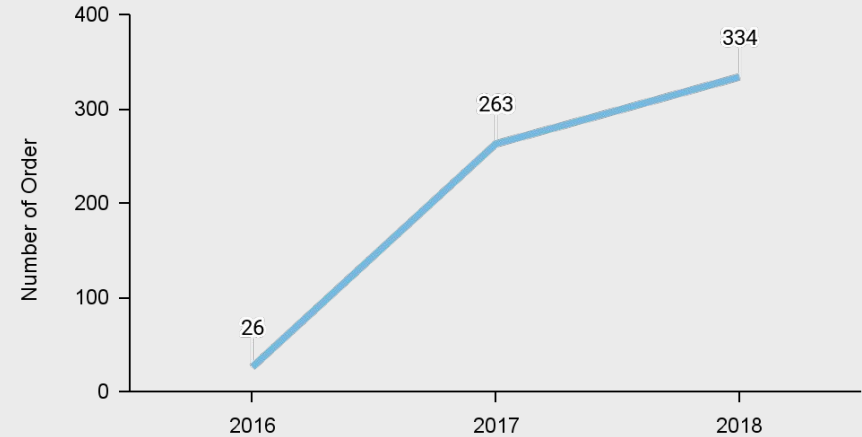


# ANNUAL PRODUCT CATEGORY QUALITY ANALYSIS

## Total Revenue



## Number of Cancel Orders



The total revenue increased each year, but unfortunately, the number of canceled orders also increased.

# ANNUAL PRODUCT CATEGORY QUALITY ANALYSIS

## Top Category

## Most Cancel Orders

2016



Furniture Decor

2017



Bed Bath Table

2018



Health Beauty

The top category and the most canceled orders change every year. But, in 2018 health beauty category became the top category and the most canceled orders. It might be because the healthy beauty category dominated the transaction during that year.

2016



Toys

2017



Sports Leisure

2018

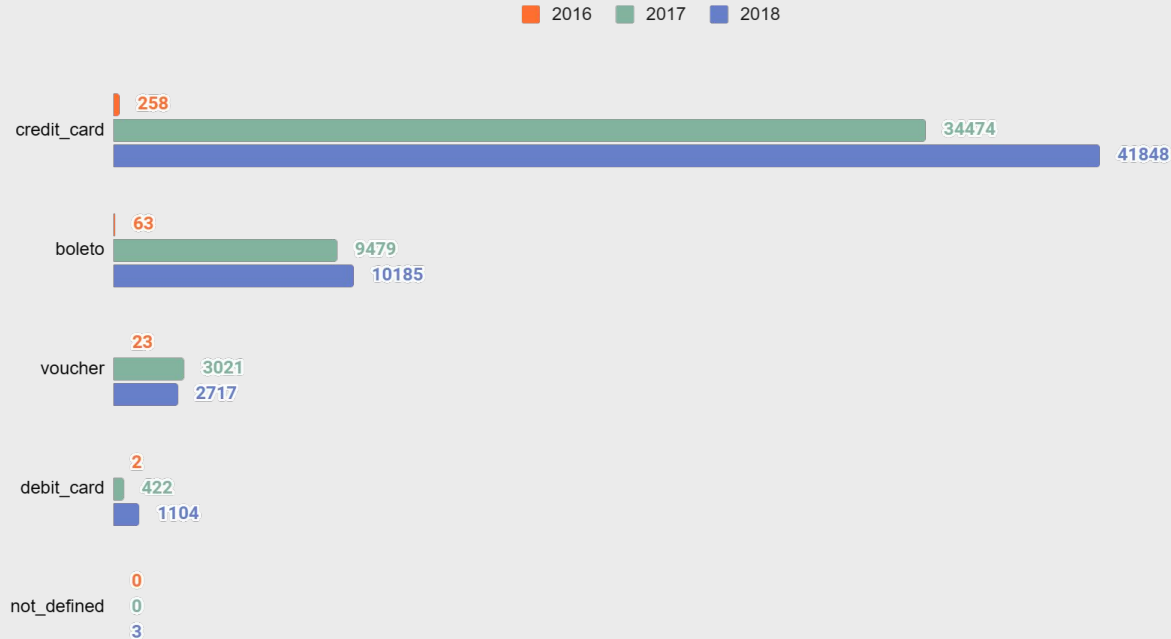


Health Beauty

# ANNUAL PAYMENT TYPE USAGE ANALYSIS

Payment Type	2016	2017	2018
credit_card	258	34474	41848
boleto	63	9479	10185
voucher	23	3021	2717
debit_card	2	422	1104
not_defined	0	0	3

# ANNUAL PAYMENT TYPE USAGE ANALYSIS



As we see above, credit card is the most payment type used by the customers.