

Analyzing eCommerce Business Performance with SQL



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“I'm Tina, a young professional with a passion for the administration and management field who has just started a journey in the world of data science. This is my very first mini project with actual data. Cause I'm a newbie and this is my very first data analysis, I appreciate your feedback for a better analyst performance and a better me. ”

"In a company, measuring business performance is very important to track, monitor, and assess the success or failure of various business processes. Therefore, this paper will analyze business performance for an e-Commerce company, taking into account several business metrics, which are customer growth, product quality, and payment types."

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Data Preparation

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Alter Table

Generate ERD

With the primary & foreign keys found, the **ERD in pgAdmin can be generated immediately** (as shown on the left) by clicking "Generate ERD" when right-clicking on the database in which the tables are stored.

[Look or Download the ERD here](#)
[Here for the query](#)

ERD

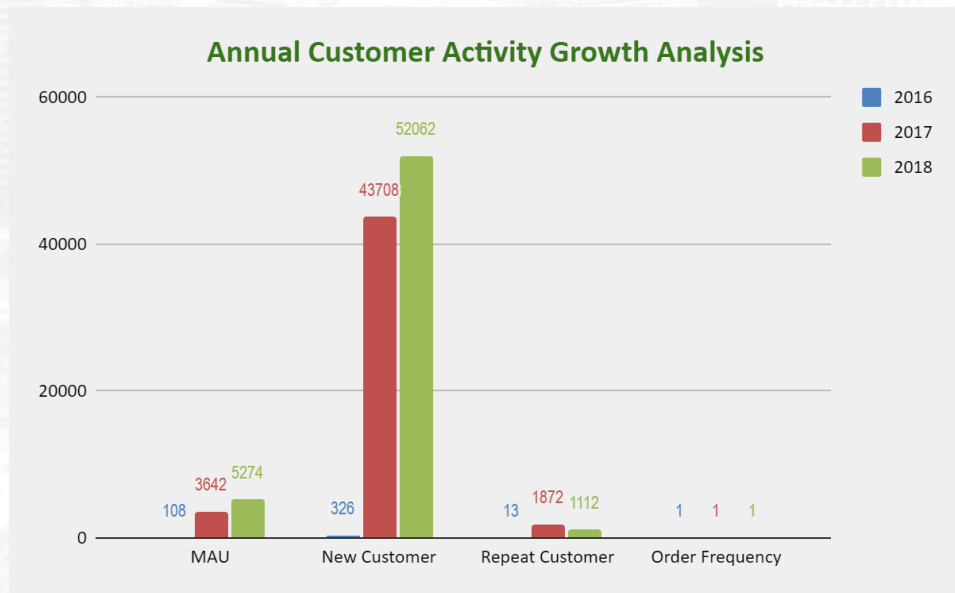
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Annual Customer Activity Growth Analysis

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Year	MAU	New Customer	Repeat Customer	Order Frequency
2016	108	326	13	1
2017	3642	43708	1872	1
2018	5274	52062	1112	1

Annual Customer Activity Growth Analysis



Annual Customer Activity Growth Analysis

From the table and graph above, **we know that:**

- The average Monthly Active User (**MAU**) **has increased every year**. However, there was a 50% reduction in the increase obtained.
- **Total new customers have also increased every year**. In line with MAU, new customers also experienced a rapid increase in 2017.
- There was **a fluctuating increase in the repeat orders made by customers**. The increase fluctuated every year. We saw that the number of customers making repeat orders increased in 2017 and then decreased in 2018.
- **The frequency of orders** needs to be a concern because it has **stayed the same for three years**. This happens because the number of customers who repeat orders is still deficient.
- Therefore, the marketing team needs to pay more attention to increasing the repeat orders, the number of repeat orders, and the frequency of customer orders.

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Annual Product Category Quality Analysis

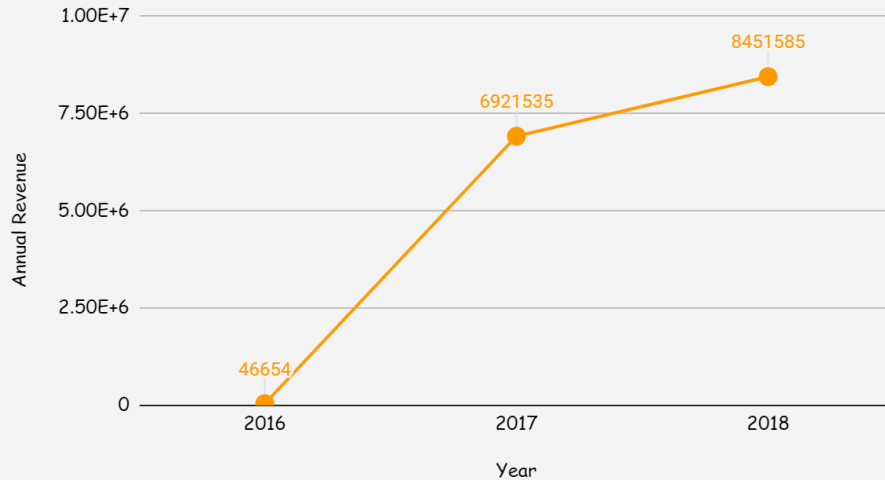
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Annual Product Category Quality Analysis

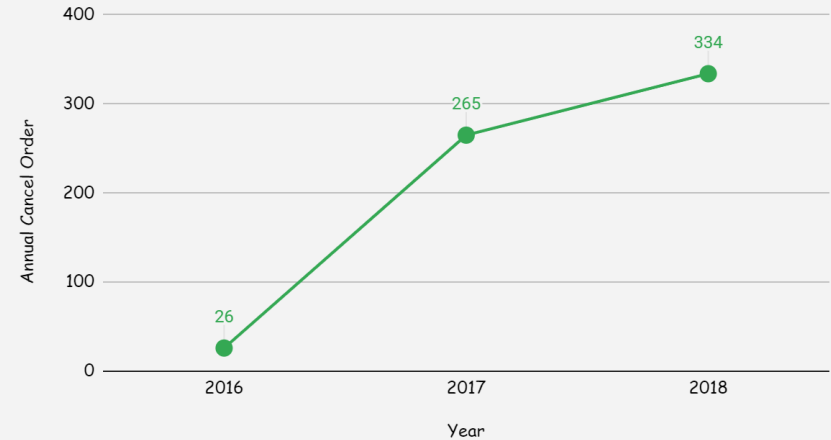
Year	Yearly Revenue	Annual Cancel Order	Top Category Revenue	Top Category Orders Cancel
2016	46654	26	Furniture Decor	Toys
2017	6921535	265	Bed Bath Table	Sports Leisure
2018	8451585	334	Health Beauty	Health Beauty

Annual Product Category Quality Analysis

Annual Revenue (2016 - 2018)



Annual Cancel Order (2016-2018)



Annual revenue & annual cancel order mengalami **kenaikan setiap tahunnya**. Kenaikan yang pesat terjadi pada tahun kedua (2017).

Annual Product Category Quality Analysis



2018 became a concern because Health Beauty products emerged as the products with the most significant revenue and the products with the highest cancel order rates.

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Analysis of Annual Payment Type Usage

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Analysis of Annual Payment Type Usage

Payment Type	2016	2017	2018
Boleto	63	9508	10213
Credit Card	258	34568	41969
Debit Card	2	422	1105
Voucher	23	3027	2725

There are four types of payment that customers can choose when shopping at this e-commerce:

- **Credit card**
- **Debit Cards**
- **Vouchers**
- **Boleto.** This type allows customers to shop in e-commerce without opening a credit or debit card.

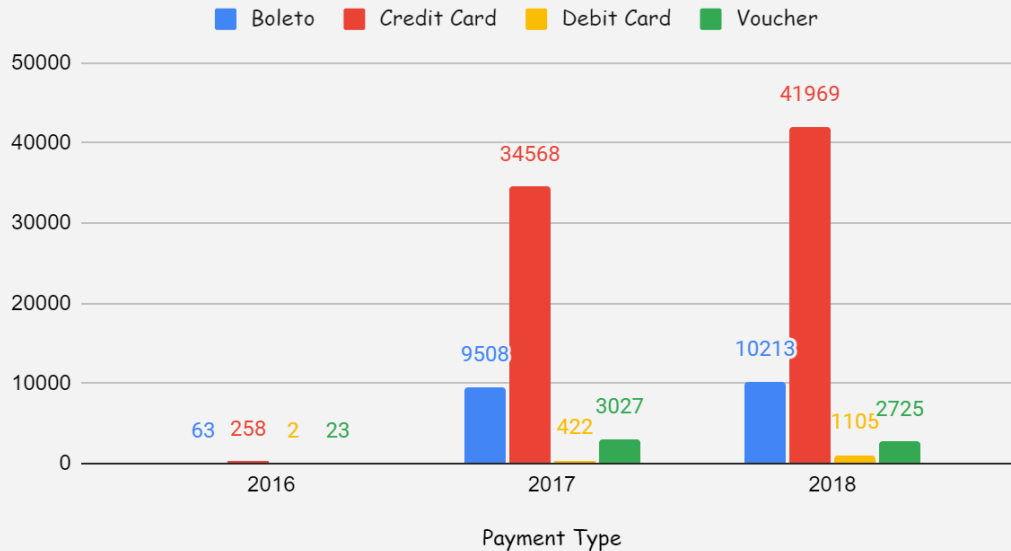
Boleto

- When the customer chooses this type of payment, the seller will issue a **Boleto Voucher**, which we can pay via internet banking, ATM, or teller.
- It usually has a higher cancel rate because it's not processed automatically like a credit card.
- Has a lower transaction value.



Analysis of Annual Payment Type Usage

Analysis of Annual Payment Type Usage



- Payment with a **Credit Card** is the most used type of payment every year.
- The use of the **Credit Card payment** type increased rapidly in 2017 in line with the rapid increase in e-commerce customers.

Analysis of Annual Payment Type Usage

- The use of Boleto, Credit Card, and Debit Card payment types has **increased every year.**
- There was **a fluctuating increase up and down in the type of Voucher payment.** Voucher usage increased in 2017, then decreased in the following year (2018)