### **Understanding the Business Problem**

* Objective:  
  The goal of this project is to develop a predictive model that estimates Customer Lifetime Value (CLV) for an e-commerce business using machine learning techniques. CLV represents the total revenue a business can expect from a customer throughout their relationship.
* Why is CLV Prediction Important?
  + Helps businesses identify high-value customers.
  + Improves targeted marketing strategies.
  + Enhances customer retention efforts.
  + Allows better budget allocation for customer acquisition.

### **Challenges**

* Data Collection: Extracting and preprocessing customer and transactional data from the database.
* Feature Engineering: Identifying key variables like customer demographics, purchase frequency, churn probability, and monetary value.
* Churn Estimation: Determining the likelihood of a customer leaving vs. continuing to make purchases.
* Model Accuracy: Ensuring the CLV model provides reliable predictions for business decisions.