

## **Problem Definition:**

In the retail landscape, accurately determining and optimizing Customer Lifetime Value (CLV) is paramount for sustained business success. CLV quantifies the monetary value anticipated from a customer throughout their association with the company. For a retail store utilizing product scanning technology, the challenge is to compute CLV reliably and derive actionable insights to influence strategic decisions.

Using the scanner data of a retail super store sales transactions, our objective is to perform a high level CLV analysis. The process includes steps such as data cleaning and preprocessing, analysis on customers, feature selection for CLV calculation, and usage of the CLV formula to obtain the scores and all calculations relevant to the objectives.

Eventually, the main goal of the project is to develop a robust predictive model to calculate Customer Lifetime Value for individual customers using the current data. This will assist in further decision making, that is, understanding patterns and overall state of the customer base, and suggesting actions to improve the customer factor of the business and maximize its profits.