

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Products sold in stores are a necessity that humans need for everyday life, by selling products or goods can make it easier for people to get the products they need. Of course, there are some products that sell well and often run out of stock because of the high demand. Product buyers also give a rating of how satisfied the buyer is with the product purchased, so that buyers will usually buy the product again or recommend products that are considered to have a high rating. The rating of the product is categorized from 1 (one) to 10 (ten).

To predict which products have a high rating, an algorithm is needed to calculate which products have a high rating and a low rating. With this prediction, the seller will prepare more products that are sold out than usual to avoid running out of stock when selling the product. Because usually high rated products have many buyers and require more stock than other products.

The collected data will be processed using the C-45 algorithm to predict which products need to be added to the number of sales. The C-45 algorithm is used to form a decision tree to determine the relationship between a number of candidate input variables and the target variable. The data used is data on products sold in stores.

### 1.2 Problem Formulation

1. Can the C-45 algorithm predict rating product accurately?
2. Is the C-45 algorithm effective for predicting rating product?

### 1.3 Scope

The data used are simulation product data of basic human needs.

#### 1.4 Objective

The purpose of this research project is to make it easier for sellers to predict which products have high buying interest, so that sellers can increase the stock of products being sold.

