

CHAPTER 1

INTRODUCTION

1.1 Background

In an era that is modern today, everything is growing very rapidly like technology. Many fields require the support of computer technology to help mobility in life. Moreover in the pharmaceutical world such as the sale of pharmaceutical products in all pharmacies, related to the supply and sale of drugs. In fact there are still many pharmacies that use manual (traditional) systems such as sales notebooks and drug stock records. This manual system has human error weaknesses such as inaccuracy, errors in recording and calculating drug sales, in contrast to computer systems that have more valid and accurate data.

A company and an agency that deals with product sales today there are still many who do not understand how important it is to have a system that can predict how many sales they have in a given period. The sales prediction system can help certain companies and agencies to prepare for what will be done in the future. With the sales prediction system, of course, companies and agencies can estimate the amount of stock needed, and of course to maintain profits so that the company remains stable. Therefore, the sales prediction system is needed to maintain the company's rate to remain stable.

Calculating the right predictions can be done with several methodologies such as linear regression, also exponential smoothing. The prediction of the quantity of pharmaceutical products sold at Saras Sehat pharmacies uses the Single Exponential Smoothing methodology. The Single Exponential Smoothing methodology can predict the sale of pharmaceutical products at the Saras Sehat Pharmacy. Exponential method is a procedure that continuously corrects predictions by averaging the past values of a series of data in a descending

manner. Exponential methods are suitable for predicting things that have random fluctuations.

1.2 Scope

The focus of the study is to predict the sales of pharmaceutical products at the Saras Sehat Pharmacy using the Single Exponential Smoothing algorithm method. Prediction results using the Single Exponential Smoothing method produce different results for each alpha in the prediction of certain drugs. Alpha which is closest to the original sale will be used to predict the results of sales in the following months.

1. Can the Exponential Smoothing algorithm be used to predict the sales of pharmaceutical products at the Saras Sehat Pharmacy?
2. The data used is sales data for the last 10 months, plus the value of the first month to predict the following month
3. The algorithm method used to predict the quantity of sales of pharmaceutical products in a Saras Sehat Pharmacy is Single Exponential Smoothing
4. Does it require different alpha to get maximum results in predicting the sales of pharmaceutical products at Saras Sehat Pharmacy?

1.3 Objective

The operation of the Saras Sehat pharmacy that is still manual causes the Saras Sehat Pharmacy manager to be less effective and efficient in determining the number of pharmaceutical products to be sold to meet consumer needs. The prediction system for selling pharmaceutical products at Saras Sehat Pharmacy can help pharmacy managers prepare how many pharmaceutical products must be prepared in meeting consumer needs based on the number of sales predictions in each month.