

## ***Abstract***

*Prediction is a systematic process of estimating the possibilities of something that occur in the future based on past information and present, so that the mistakes (the difference between the actual data with predicted results) can be reduced. Forecasting methods as it is called time series. Artificial Neural Network (ANN) capable of mapping the value of past and future values of time series data with the learning process as it occurs in the human brain. One method of ANN is a method of Fuzzy Adaptive Resonance Theory (Fuzzy ART). The excellence of fuzzy ART is able to learn new patterns without forgetting the previous patterns. Fuzzy ART is an unsupervised learning system that implements competitive learning algorithm. The learning process characterized by fuzzy ART weight changes based on certain parameters. The output generated by this system is the result of prediction and accuracy of the prediction results.*

*In this final project, the data used is monthly and weekly sales data with the input of the two series and three series. Based on the results of training, the network parameters on fuzzy ART have relevance. Rho parameter affects the alpha parameter, while the alpha parameter affects in the parameter of beta. It can be seen in the stability of the iteration based on the smallest value of the Root Means Square Error (RMSE). While based on test results and analysis, the accuration of the system was less good because the error result is more than 1.*

***Keywords : Prediction, time series, Artificial Neural Network (ANN), Fuzzy ART, Root Mean square Error (RMSE)***