

## **ABSTRACT**

*Turnover of purchasing data on retail transactions and enthusiasts as well as sales of basic food stores and mini markets has increased, over time the increasing number of basic food stores makes retail store management have problems with better marketing strategies in order to compete in terms of vision and sales. To find out and solve problems that exist in retail stores, a method for solving these problems is determined using the a priori algorithm and the association method, using the Python programming language and the help of Rapid Miner tools. This a priori algorithm will form a frequent itemset with a predetermined number of parameters with two parameters, namely support and confidence. One of the most efficient algorithmic association analysis stages is the analysis of the highest frequency pattern. Support is the percentage of item combinations in the database, while confidence is the strength of the relationship between items in the association. This a priori algorithm can help in data mining and marketing effectively and precisely. This study aims to provide a clear picture and data about the relationship of the goods sold in the store by looking at the data of goods sold for 1 month of February. The results obtained from the study are the support value 0.20% and the confidence value 0.6% with a total of 125 transactions, from the total data, there are 591 product data 5 combinations in 3 itemsets where from the results of the combination the average product purchased by the customer namely party supplies and party food such as chocolate. With the research on the calculation of the pattern of sales of goods on the retail data, it is hoped that the food shop owners can see more profitable business strategies and help in future prospects to continue to better manage data with data mining.*

**Keywords: Algorithm Apriori, Data mining, Retail Store, Association rules, Support, Confidence.**