**ABSTRACT**

Transaction marketing has become the most important source of profit for various retail organizations. It represents one of the largest and most dynamic datasets of user purchased products. When these transactions are processed in large volumes, they could unravel potential information. The information could be about the frequent itemset brought by the customer or the relationship between the products or the time period when the sales are at peak. With this massive amount of information hidden, there has to be an automatic tool that can discover the patterns based on user-transactions. The proposed system is to develop a prototype that helps to infer those information efficiently by data mining. This helps in improving the marketing strategies, determining the placement of goods,designing sales promotions for targeted customers to improve customer satisfaction and hence the profit of organization. This approach uses the K-Apriori algorithm to mine frequent itemsets from the market-basket database after which the association rules are generated.

**KEYWORDS** : Transaction marketing, datasets, itemset, data mining, K-Apriori algorithm, association rules.