

## Abstract

Collaborative filtering method is a popular method used for recommendation systems with various domains. In the book domain, the method uses the rating that the user gives to the book. But there are disadvantages to the method because they have to consider all the books available for the recommendation process. Having to consider the whole book, it will take longer to make a recommendation. Clustering based is one way to overcome the lack of collaborative filtering methods. This method will group books according to user resemblance, so the recommendation process does not need to consider the entire book. Most clustering based methods must know how many groups of books will be used. Because it does not have the number of previous book groups, self-constructing clustering can be used if the data used has no number of groups. In this final project, a study about clustering based method implementation with self-constructing clustering algorithm. This algorithm will group the book based on the user's similarity without knowing the number of existing book groups. The test results show that the method with the algorithm can be used up to recommend the book to the user on the data only in the form of user data, books, and rating. Testing is using 2 data. The test results produced DOA and MAE of 50% and 1.10283, and the second data obtained 56% and 1,137.