

## ***Abstract***

*Current advances in technology and the internet is growing by leaps and bounds, the information is also more easily obtained by anyone. With the ease of accessing the internet, the possibility of plagiarism are also getting bigger. Plagiarism is a serious crime in education and it is very likely to occur for example in the case of the manufacture of final project, Thesis or Dissertation. Therefore, we need a system that can detect plagiarism. Currently being carried out research on the system to detect plagiarism. The study was conducted to create a system with several stages, stemming, clustering and detection of plagiarism. At this final project, clustering performed useful to facilitate the relevant search query and see the similarities between the documents, which will be useful for the next stage, the detection of plagiarism. Cluster algorithm used in this final project is the Adaptive Fuzzy Clustering Algorithm.*

*At this final project, the document will be on clustering in preprocessing beforehand, which is preparing the document before it can be grouped. Preprocessing consists of stopword removal, removal of punctuation, stemming and term weighting. Adaptive Fuzzy algorithm begins by generating a random initial centers, and distance calculations performed throughout the document to each cluster center. After the calculation, the value of membership, which is determining how large a document is a member of a cluster. Based on these membership values, we determined a new cluster center. This step is repeated until the cluster center is stable. After a stable cluster center, will be normalized and the smoothing of the values and the determination of cluster membership for each document. From the test results and analysis has been done, Fuzzy Adaptive Algorithm can be applied to document clustering by first do preprocessing. Input parameter values in this algorithm, the number of clusters and fuzzy parameters affects the outcome of the cluster and the cluster quality.*

***Keyword :*** *Clustering, document, Adaptive Fuzzy*