**Abstract**

**Learning groups have the goal of solving a problem, sharing ideas or thinking, and completing tasks in cooperative learning. There are two types of grouping, namely homogeneous and heterogeneous. Homogeneous are groups that have the same characteristics while heterogeneous groups are groups that have different characteristics. In this final project build a system that can group students into a group using the k-modes method. k-modes is an unsupervised learning algorithm technique based on the k-means algorithm pattern, in k-means there are limitations that can only calculate numerical data, to handle the limitations of k-means the k-modes algorithm is formed by using a simple matching dissimilarity measure to calculate categorical object, change the means to modes. K-modes are clustering algorithms, so they can only produce groups whose members are similar, so k-modes can only form homogeneous groups. Evaluation results that have been obtained from the results of silhouette calculations, the k values recommended are likely to be found at high k values such as k = 9 and k = 10, and the smallest average silhouette values are found at smaller k values such as k = 2. This happens because the fewer groups formed, the more members formed in a group and has a variety of characteristics, while the more groups formed, the fewer members formed in a group and the characteristics can be more similar. In addition there is the result of a silhouette value approaching -1 or the silhouette value equal to 0 is due to the group equalization factor.**

**Keywords: Study Groups, Homogeneous Groups, Clustering K-modes, Silhouette Analysis.**