## **Abstract**

Increased activity of a visit to the website generates huge enough data about users and their interaction with a website that is stored in the web server logs. One of the information that can be obtained is user navigation patterns. User navigation patterns generated, could give an overview about what users actually do and need when access the website. Understanding the user navigation patterns can be useful for understanding user behavior in accessing the website. So it can be used as a reference in improving the quality of the website and ensure user satisfaction when using the website. In the domain of e-commerce, user navigation patterns can be used as a reference for determining a business strategy based on user behavior is obtained. In this final project, the web server logs of tuneeca online store will be processed by implementing clustering, one of web usage mining methods. Web usage mining is one of the application of data mining techniques that can be used to discover the user navigation patterns. The log data will be going through the preprocessing stage, then performed clustering to the pages by using graph partitioning algorithm. The result shows that determining the minimum weight value affects the number of clusters produced and the visit coherence value obtained. Performance of graph partitioning algorithm is quite good in forming clusters of navigation patterns based on high value of modularization quality obtained. User navigation patterns generated can be used as a reference for the recommendation of web development Tuneeca online store.

**Keywords:** web usage mining, user navigation patterns, web server log, graph partitioning, visit coherence, modularization quality