Abstract

When we observe the computer network, it will form a graph. If we draw a network using a computer network using graph G(V,E). where V is a set of vertex which represent computers on that network and E is a set of edge which represent network connecting one computer to the others.

We can do network processing using the graph coloring, and one of the coloring technique is f-coloring. On the f-coloring, every vertex will be given f(v), which represent how much of computation can be doing by a computer on the same time. On the f-coloring, graph will be divided into two classes, that is class 1(Cf1) and class 2 (Cf2), where class 1(Cf1) is optimal class. On this Final Project, graph topologies that I use are wheel graph and complete graph.

Based on research, graph that belong to the class 1(Cf1) will do the computation as big as $\Delta_f(G)$, while in the graph that belong to the class 2 (Cf2), that is $\Delta_f(G) + 1$. From there we can see the graph that belong on the class 1 is more optimal than the graph that belong on the class 2.

Keywords : *F-coloring, Wheel Graph, Complete Graph, Optimal Class, Topology*