

ABSTRACT

Graph theory is a branch of mathematics that has most applications in everyday life. Determining the shortest path from one point to another is one of them and could take advantage of graph theory. Various people encountered similar problems with different variations, one example is the shortest route search to a particular area. Along with the development of science and technology, the problem of finding the shortest path can be completed with various algorithms. Floyd-Warshall Algorithm is one of them. Floyd-Warshall Algorithm is one of the algorithms that can be used to calculate the shortest path, and able to compare all the possible trajectories on the graph for each side of all existing nodes.

In this research, the author has conducted a survey and gets numerous spots at Telkom University which are appropriate to use as Assembly Point. For this research purpose, the author has made an Android based application with Floyd-Warshall algorithm to find the shortest path from any point at Telkom University to Assembly Point. When the application is running the device will send the MAC Address to the server and searches for user current position (Longitude and Latitude) and began searching for the shortest path to the Assembly Point using Floyd-Warshall Algorithm.

Keywords : Assembly Point, Floyd - Warshall, graph