THE DETERMINATION OF THE SHORTEST ROUTE USING GOOGLE MAPS TECHNOLOGY MASHUPS USING ANDROID MOBILE SYSTEM

Name : SATRIA PRASAMYA  
NRP : 5106 100 030  
Major : Informatics Engineering IT Dept – ITS  
Supervisor I : Ary Mazharuddin S., S.Kom, M.Comp.Sc

Abstract

Determining the shortest path is frequently necessary in our daily lives since we often take trips from one place to another and take into account the time efficiency, distance and how much they cost. Generally, there are two methods in determining the shortest paths: the conventional method and heuristic method to measure greater paths. The heuristic method is used since it requires less time. One of the well-known methods in determining the shortest paths which is also classified as a heuristic method is the Ant colony optimization. Named based on the similarity behavior with ant colonies that look for the shortest paths between their nests and the sources of foods.

Inspired by this phenomenon, an application that runs in Android mobile system is to be implemented in this final project. This application uses of the method of Ant Colony Optimization in determining the shortest paths by using the technology of Google Maps. The procedure that uses Google Maps is believed to be acceptable considering the fact that Google provides the most comprehensive map information compared to other map providers. In addition, Google Maps would generate an attractive shortest-paths-searching application enables the users to acquire more detailed illustration on the desired paths easier. The users would be able to search their shortest routes by entering the place of origin and the destination to the system.
The testing of this application is conducted through several scenarios. The test result also showed a time efficiency by using the application because there are an estimated time provided by Google Map so useful to the user.

Keyword: Shortest path, Ant Colony Method, Google Map, Mobile System Android