ABSTRACT

This final assignment has something to do with route design and passenger picking-up scheduling on a travel bearon with using Geographic Information Systems (GIS). The objection of the research is to design the fastest route for picking-up passengers, so that we can gain the minimum travel time and design the passengers picking up scheduling.

The research start with clustering passanger to decide wether the passengers are proper to be set out. the proper group then is shorted based on pos code. After clustering, the next steps is determining a picking up route based on the clustering result using then criteria of minimum time and the last step is to make the passengers picking up scheduling.

Advantage from this systems is speedy running time, the passenger in systems is unlimited, be sites the picking up the passengers, can too delivery the passengers to Surabaya and operating software is very easy.

With 20 passengers, the research delivers the passengers order that must be picked up, the directions that must be taken to pickup the passenger, the total passing trough time, the picking up schedule of each passengers with 3 output route, first route is 15.44 min, second route : 53.32 min and third route is 44.16 min and the amount of vehicles the must be operated are 3 vehicles.

Keyword : route determination, passenger scheduling, Geographic Information Systems, Dijkstra algorithm