
Abstract

Currently, public city transportation is still the main choice as a means of transportation. Its flexible fares and routes affect the traveling cost in the end, so people will mostly look for the cheapest and most efficient route plan. Although applications offering *angkot* route plans to travel from one place to another already existed, they have yet to offer the cost estimation thus making their users to estimate the cost by themselves. This final project goal is to offer a solution for the problem above by providing the most economic *angkot* route plans cost-wise and also showing alternatives, so the users can choose their own solution of traveling by *angkot*. This final project utilizes modified A* algorithm as a basis to calculate the best route plan based on total fare and also total distance, and also provide multiple solutions as alternatives. The testing involves comparing the system's outputs with other outputs from an already existing system, Google Maps. Output consistency with user's input is also tested. A survey regarding public user's preference between this system's and Google Maps' output was also held. Testing results show that this algorithm produces better output compared to Google Maps, and this algorithm's output is consistent with user's input. Survey shows that public respondents prefer this system's output to Google Maps' based on fare, walking distance, and *angkot* combination options.

Keywords: spatial, geographical, road, transportation, fare
