

Chapter I

Introduction

1.1 Problem Background



Figure 1.1: Example of angkot

Angkot(Angkutan kota)[10] is a type of public transport in Indonesia that has predefined route[14] based on government regulations. Angkot can pick up or drop passenger they like along the route[14]. Basically, Angkot has the maximum rate that is if passengers depart at the starting point and stop at the endpoint. For example depart from Terminal St.Hall in Bandung using angkot route[14] St.hall - Gedebage with an amount of cost is IDR 8000 from field research results which will stop at the end point in Terminal Pasar Gedebage because the maximum rate is IDR 8000 and passing the Road in sequence: Suniaraja → Pasar Barat → Pasar Selatan → Otista → Kepatihan → Dewi Sartika → Dalem Kaum → Alun-Alun Timur → Asia Afrika → Banceuy → ABC → Naripan → Sunda → Veteran → Jend. Ahmad Yani → Simpang Lima → Jend. Gatot Subroto → Malabar → Palasari → Talaga Bodas → R.A.A. Marta Negara → Reog → Karawitan → Kliningan → Buah Batu → Soekarno - Hatta. the illustration in Figure 1.2.

But in fact, because of angkot can pick up and drop passenger anywhere along its route[14] causing the cost of angkot become uncertain. The uncertainty of cost causes not known exactly where the endpoint & coverage of the paths passed by Angkot. For illustration, take an example departs from Papandayan Hotel with cost IDR 5000 in Figure 1.3. So if using the Angkot

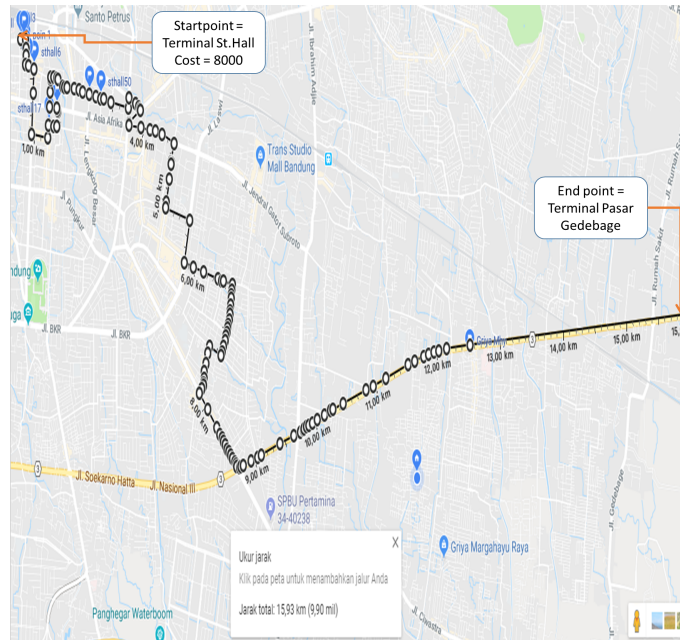


Figure 1.2: Example of the maximum rate of angkot

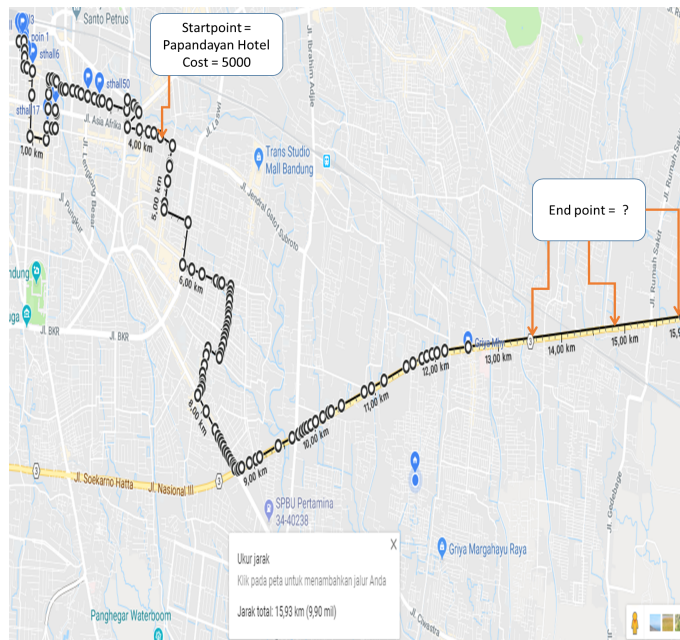


Figure 1.3: uncertain of angkot rate and coverage of paths

services from a departure point to know where is the location of endpoint how much cost to be prepared to pay for Angkot services. This issue is important to be resolved. Because it can help the people, for example, provide

recommendations to tourists where the place can be reached from one point by using angkot based on the cost. Therefore In this final project author proposed to make Angkot prediction coverage[3] model based on cost from depart point. Something that wants to covered is the paths passed by angkot, points, route[14], rest of amount cost, endpoint of Angkot, and total distance. Phase of the modeling will be discussed in the next chapter. The implementation poured in this final project entitled "Cost-based Public Transport Coverage".

1.2 Research Question

This is the research question that the problem need :

1. How to know where is the endpoint of Angkot from departure point based on cost ?.
2. How to get coverage of the paths & points that have been passed by Angkot, Routes of Angkot, total distance, the rest of amount cost from the point of departure to stop at the endpoint ?.
3. How to test the accuracy of the results displayed by the system with the actual conditions ?.

1.3 Constraint of the Problem

The scope of problem in this final project are

1. The angkot route[14] data used is only 2 that is Station hall - Gedebage (round trip), Margahayu - Ledeng (round trip) from Bandung City Transportation Department.
2. The minimum amount of cost used to get the result is IDR 2000.
3. The maximum amount of cost used to get the result is IDR 10000.
4. The point data used in this final project is the coordinate point comes from Google Maps API.

1.4 Purpose

Here are the goals to be achieved on this final project.

1. Knowing where the endpoint of Angkot from the departure point based on cost.
2. Knowing coverage of the paths & points that have been passed by Angkot, Routes of Angkot, total distance, the rest of amount cost from departure point to stop at the endpoint based on cost.
3. Analyzing the accuracy of the results displayed by the system with actual conditions.

1.5 Activity Plan

As for the activities to be performed in this final project is divided in several stages as follows.

1. Related Work

At this stage author do the activity of studying theories and related material for this final project research be able to solve the problems.

2. Methodology and Design System

At this stage author do the activity of designing and making systems based to solve the problems encountered.

3. Experimental Result and Analysis

At this stage author do the activity experimental result from using a system that has been designed and analyze the results that have been obtained from the system. The analysis will be done by looking at the accuracy from the system with the actual conditions.

4. Conclusion

At this stage author make a conclusion on the results of this final project research.