

# CHAPTER I

## INTRODUCTION

### 1.1 Background

BRT is one of the public transportation that was quite popular among citizens in Semarang. *Bus Rapid Transit (BRT)* is “a high-quality bus-based transit system that deliver fast, comfortable, and cost-effective at metro-level capacities”<sup>1</sup>. A BRT corridor is a section or contogous roads served by a bus route or multiple bus routes with a minimum length of 3 kilometers that has dedicated bus lanes. In Semarang itself already have three main corridors, including from Mangkang to Penggaron as corridor 1, from Sisemut to Terboyo as corridor 2, and from Cangkiran to A.Yani airport as corridor 4. In other hand, from the information side that contained in internet about this BRT Semarang is not complete yet too, and just such general informations. Imagine if tourist uses this incomplete information for the general information of traveling, then they are also definitely still in doubt about the accuracy of the information contained. Sadly, there is no information system that avialable to be the solution of this problem. This can be hard for people who are not originally from Semarang to traveling or visit this city in order to having a holyday. Especially if they are foreign tourists who also hindered by the language to communicate with the local citizen.

In order to provide the right information in terms of location, this project will use the Google Maps as the initial view, as the map itself has a function as the most effective information giver of the area and land since

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<sup>1</sup> Institute for Transportation & Development Policy, “What is BRT?,” <https://www.itdp.org/library/standards-and-guides/the-bus-rapid-transit-standard/what-is-brt/>, (January 25<sup>th</sup> 2017; 16.03)

the ancient time. And with help of Google APIs which also has an important role as a framework to provide the features provided by Google.

In this problem, actually can use djikstra algorithm as the distance calculator from one location to another. But because of the project uses the API as a framework which can become the distance calculator and other features was already available on it, so there is no algorithm needed. For the data structure itself can use array for store or call location point from the database.

This project aims to find the correct route of BRT for user to take from their current location to their destination. To approach this, this project will use Google Maps API modules such as Search Box, Current Location, Direction, and Data Writer.

### **1.2 Scope**

The limit that is used to accomplish this project include: how to detect which BRT bus stop closest to the user, and how to determine the route that will pass by the BRT to the destination bus stop.

### **1.3 Objective**

The objective in this project is to assist the user in determining the nearest bus stops and to determine the most effective route to the BRT stop destinations.