CHAPTER 1 INTRODUCTION

1.1 Background Of The Project

Accessibility mainly depends on the availability and affordability of the services. Ensure that all the sectors of the society should have equal and adequate access to Primary healthcare, regardless of socio-economic and geographic factors. This is key factor to provide healthy environment and to minimize disease risk in the developing country like Balikpapan. Health care access is a major concern for policy makers globally. Spatial accessibility index represents the degree of fit between the clients and the health care system.

I-Go: Intelligent Route Selection with the Dijkstra Method is an application that aims to make it easier for elderly parents to be able to find the location of the nearest hospital. This application has a feature that accesses Leaflets for default location points (Latitude and Longitude coordinates). Then there is access to hospitals which aims to find out which hospitals are available and which are not. The process of using it is quite easy (Rekha et al., 2017).

The process of using it is quite easy. First, the user opens the I-GO Website. Then look for the hospital list feature to find out which hospitals are available. In the application there is a hospital search feature, select a hospital room search feature, there are several hospitals closest to Bal Then select the RSUD Beriman Balikpapan. After selecting the I-Go: Intelligent Route Selection with the Dijkstra Method is an application that aims to make it easier for elderly parents to be able to find the location of the nearest hospital. This application has a feature that accesses Leaflets for default location points (Latitude and Longitude coordinates). Then there is access to hospitals which aims to find out which hospitals are available and which are not. The process of using it is quite easy.

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1.2 Problem Statement

The Dijkstra algorithm is a pathfinding algorithm that can be used to solve a variety of traffic problems, including:

a. Finding the shortest route between two points: The Dijkstra algorithm can be used to find the shortest path between two points on a map. This is useful in a traffic context, as it can help drivers or autonomous vehicles avoid congestion and minimize the time it takes to reach their destination.
b. Routing around obstacles or closed roads: If a road is closed or blocked due to construction or an accident, the Dijkstra algorithm can be used to find an alternate route around the obstacle.

1.3 Objectives The Project

a. The objective of the Dijkstra algorithm in the context of traffic is to find the shortest path between two points on a map. This is useful for a variety of applications, including routing vehicles around obstacles or closed roads, optimizing traffic flow, and predicting and analyzing traffic patterns.
b. By finding the shortest path between two points, the Dijkstra algorithm can help to minimize travel times and reduce congestion on the roads. This can improve the efficiency of the transportation system and enhance the overall flow of traffic.

1.4 Scope Of Project

1.4.1 User Scope

a. General Commuters: Regular commuters who rely on transportation systems to travel from one location to another. This includes individuals who commute by car, public transit, cycling, or walking. They can use the system to find the most efficient and optimal routes based on their preferred mode of transportation.
b. Tourists and Visitors: People who are unfamiliar with a particular city or region and require guidance in navigating the transportation network. The system can provide them with route

recommendations that consider popular tourist destinations, public transportation options, and other relevant factors.

c. Healthcare Professionals: Doctors, nurses, and other healthcare staff who need to efficiently navigate the hospital to provide patient care, attend to emergencies, or access various hospital resources such as laboratories, pharmacies, or operating rooms.

1.4.2 System Scope

a. User Interface: The system will have a user-friendly interface that allows users to input their starting location, destination, preferred mode of transportation, and any additional preferences or constraints.

b. Personalization and Customization: The system will allow users to customize their route preferences and constraints. Users can specify preferences such as avoiding toll roads, selecting wheelchair-accessible routes, or choosing eco-friendly transportation options.

1.5 Project Assumptions And Limitations

1.5.1 Project Assumptions

Acceptance and Adoption: The project assumes that users will find value in the system and adopt it as a preferred tool for route selection. It assumes that users will be willing to trust and rely on the system's recommendations for their daily commuting or travel needs.This app can't make sure the route of this health facility is correct or not

1.5.2 Project Limitations

This application can only calculate routes based on the input provided, and it currently supports the shortest route option with only 2 waypoints. Additionally, for detecting the nearest route, the application can only consider pre-programmed location points."