# CHAPTER III PLANNING

## 3.1. Research Methodology

This project was done using incremental approach. These approach are:

### 3.1.1. Analysis

Research project will be started by understanding rules in TSP and required parameters that correspond with the scope of project. After that, analyze the TSP by listing each problem and its solution. Project management of time and scheduled workflow should also need to be planned to give full analysis.

#### 3.1.2. Collecting Information

After doing analysis, information needs to be collected before coding the program. The collection of external information consists of how to connect Java programming language to Google Maps, requesting JSON data from Google Maps.

For the internal information will consist of how to put two different algorithm in one program, matching the both algorithm process with same data structures which is array list, creating algorithm process inside Java language that can displaying the result of the search.

#### 3.1.3. Program Design

After finished collecting required information, the final step before doing the code is by giving data flow diagram (DFD) process. Which is important to keep the project to stay in progress, by gives deadline in each process according to time limitation.

#### 3.1.4. Testing and Finishing

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After finishing all the code in program, testing also required in order to finding the unfinished coding or bugs that might be insulting for the future use. After having it tested then for the finishing, preparing little guide of how to use the program might be necessary. Because by using two algorithms in one program might result complicated understanding of program interface.