

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

File searching is an operation to search the data by tracking the directory in a specified category. Searching file on a computer manually will take time to find it, so it becomes inefficient. There are so many files stored in a directory. The user will have difficulty to find any files they are looking for by checking one by one in folders. This problem can be solved easily if the user uses a filename search application instead of searching it manually.

Knuth-Morris-Pratt (KMP) is a string matching algorithm that is used to compare data in the form of text with the pattern entered by the user. KMP algorithm is suitable to be implemented in file searching application. KMP algorithm will find the file if the string to be searched does exist.

The project is implemented with KMP algorithm to develop file searching application. The file search application uses Linked List data structure to store the file's data. The result to be achieved from developing file search application is, it can work efficiently. The file search application is able to search the files that are already stored in Linked List by input the file's name.

### 1.2 Scope

The program is created using Java language by using Linked List data structure, Wildcard Characters, and Knuth-Morris-Pratt algorithm. Linked List is use to stored the file's data, while KMP algorithm is use to search filename. The topic to be discussed in this final project has following boundaries :

1. Does the application can do a filename search ?
2. Is Knuth-Morris-Pratt algorithm is suitable for the application ?
3. Does the application can find search result ?

4. Does the application can find search result using Wildcard Character ?

### 1.3 Objective

The objective of this file search application is to allow the user to search filename and display it in Java GUI. The file search application is able to search file's data based on filename. It also can search filename using asterisk (\*) and question mark (?) searching.

