

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Sorting is a process of arranging numbers in a particular order and in different sets. Sorting is to facilitate the search data, and also to make data more systematic order. Sorting method is very important role in solving some cases of searching values or variables that are not sequential. This method is far more effective than checking one by one on the list, imagine if you have to find a value in the data that amounts to millions or billions.

Many problems are often faced by users of the program, especially for the students of informatics engineering. The problems is like the user does not really understand about how the sorting method works. An easy solution to solve this problem is visualize how sorting works in a program view. This visualization will make the user become understand what sorting is and how the sorting work for resolving a case.

Not only knows, with this sorting visualization, the user also be easier to learn. The easiest way to visualize is by using an HTML5 canvas to draw object that need to be visualized. The benefit of this visualization program is to make the user easy to know how the sorting method works.

### 1.2 Scope

The scope of this program based from the problem above are :

1. The sorting method that used in this program are Shell and Exchange Sort.
2. The sorting method will be visualize in the data structure using by HTML5 canvas.

### 1.3 Objective

The purpose of this research is to make the user really understand about how Shell and Exchange Sort works, with arrange the visualization data using HTML5 canvas. Beside that, it can be used to learn for programming algorithm especially sorting techniques.

