CHAPTER 1
INTRODUCTION

1.1 Background

Visualization is a representation of an explanation, orders, etc. by using text, images, numbers, maps, and charts.¹ Nowadays, visualization has been developed and are widely used for the purposes of scientific, education, interactive multimedia, medicine, etc. In the education world, visualization media can facilitate students in learning process.

Linked list is a data structure that contains a data set called nodes which are arranged sequentially and interconnected. Linked list is dynamic and not limited. Single linked list only have the next pointer, while doubly linked list have two pointers which are next pointers and prev pointers.

Linked list is one of the learning materials in informatics engineering. Many students have difficulty in studying linked list autodidact. Therefore, visualization media is needed to facilitate the linked list learning.

Results to be achieved from this project is to help students in studying linked list. The application uses HTML5 and JavaScript programming language.

1.2 Scope

The scope of this application are:

1. This application can add new nodes and placed on specific position
2. This application can delete an existing node
3. This application can sort a linked list
4. This application can search for nodes in linked list

¹ Zutan Mohammad Zain, Badudu Jusuf Sjarif, “Kamus Umum Bahasa Indonesia”, 1994
5. This application can count the number of nodes.

6. This project implements doubly linked list data structure.

1.3 Objective

The objective of this application is to facilitate students in learning doubly linked list data structure. The application can add, delete, search, sort data in linked list and count the number of nodes.