Data structure Definitions

List: series of indexed objects where order matters

$\sqrt{\text{object}} \begin{array}{c|c|c|c|c|c}
\text{index} & 0 & 5 & 7 & 4 \\
\text{value} & 1 & 4 & 3 & 2 \end{array}$

$\sqrt{11 \rightarrow 4 \rightarrow 3 \rightarrow 2}$
Tree: a hierarchy in which each node has only one node referencing it in the preceding layer and an unlimited number of nodes it is referencing in the following layer.
Graph: a structure in which any node can point to any non-negative integer number of other nodes.
Types of Linear Structures

List:
- Linked List
- Doubly Linked List
- Array List
- Sorted List
- Unsorted List
- Circular List

Stack:
- Array Stack
- Linked Stack

Queue:
- Array Queue
- Linked Queue
- Circular Queue