

Array

An array is a dynamically-created object that serves as a container to hold constant number of values of the same type.

The best situation to use an array is when you need to iterate through all elements in the sequence faster and utilize less memory (compared to a linked list).

Linked List

A linked list consists of a group of nodes which together represent a sequence.

The best situation to use a linked list is when the data dynamically grows.

Queues

A queue is like a line of people at a grocery store. The first person in line is the first person to be served just as in a queue.

The best situation to use a queue is when you want an order, the data will be processed in First In First Out order.

Binary Search Tree

A binary search tree is a tree data structure in which root node is less than or equal to left subtree and greater than or equal to right subtree.

The best situation to use a binary search tree is when you need the data to be sorted, you need to search for a range of values and you need your program to be memory-efficient.

Binary Heap

A binary heap is also a type of tree data structure. Every node has at most two children. Also, it is a complete tree. This means that all levels are completely filled until the last level and the last level is filled from left to right.

The best situation to use binary heap is when you want quick access to the largest or smallest item, selecting the minimum or maximum value and need operations to be faster than binary tree data structure.