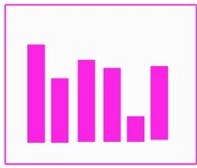
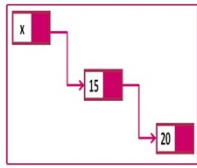


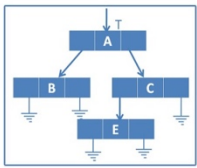
Data Structures



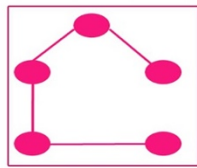
Sorting



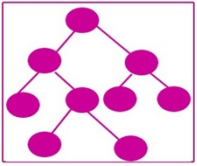
Link list



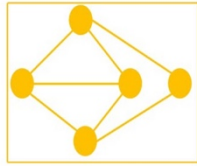
list



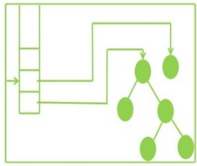
spanning tree



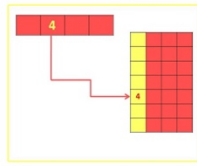
Tree



Graph



Stack

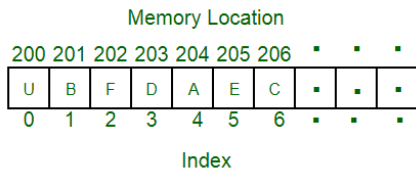


Hashing

A **data structure** is a way of organizing, managing, and storing data. The main functions of data structures are for inputting, processing, maintaining, and retrieving information. Different data structures are suited to different types of applications. Some are even highly specialized to certain tasks. Selecting the least efficient data structure for a particular task could produce slow, unresponsive code.

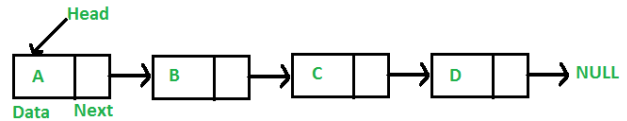
List of Data Structures

Arrays



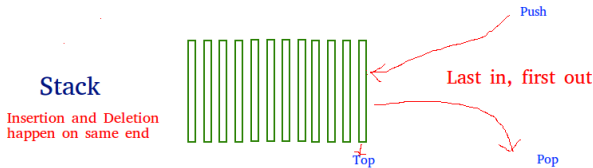
A collection of items stored in adjacent memory locations

Linked List



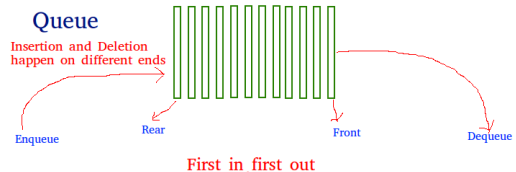
Elements are not stored in adjacent memory locations and are linked using pointers

Stack



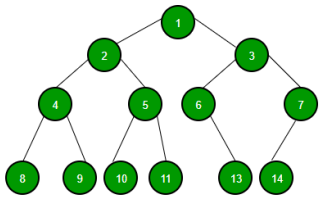
Linear data structure where elements are stored in particular order, such as FILO (First In Last Out)

Queue



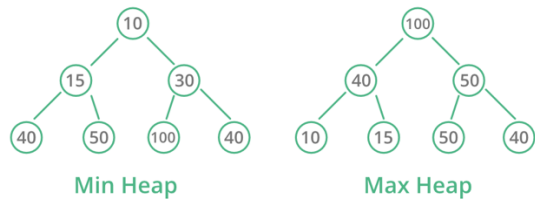
Linear data structure where elements are stored in particular order, such as FIFO (First In First Out)

Binary Tree



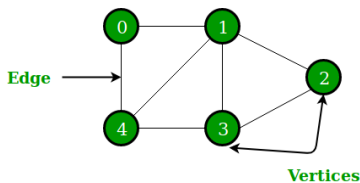
Elements have a most 2 children, which are called the right and left child

Heap



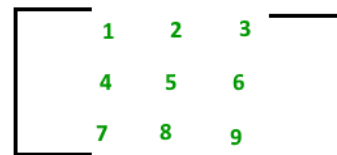
Complete binary tree-based data structure of two types: Max-Heap and Min-Heap

Graph



A finite set of vertices and set of edges which connect a pair of nodes

Matrix



Collection of numbers arranged in an order of rows or columns