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**
  - Memory Location
  - 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