

Tutorial 01 :-

Q:- 01) Write down the difference between an array and the structure?

array	structure.
• declared using '[]'	declared using the 'struct' keyword.
• the size of an array is fixed.	the size of a structure is not fixed.
• derived data type	user defined data type.
• multi dimensional arrays can be formed.	nested structures can be formed.
• array of structures can be formed.	structure can contain array as its member.
• elements are stored in contiguous memory location.	element may not be stored in a contiguous memory location.

Q:- 02) Where should you use data structures?

any where data is handled.

Q-03) What are the types of data structures?
Array.

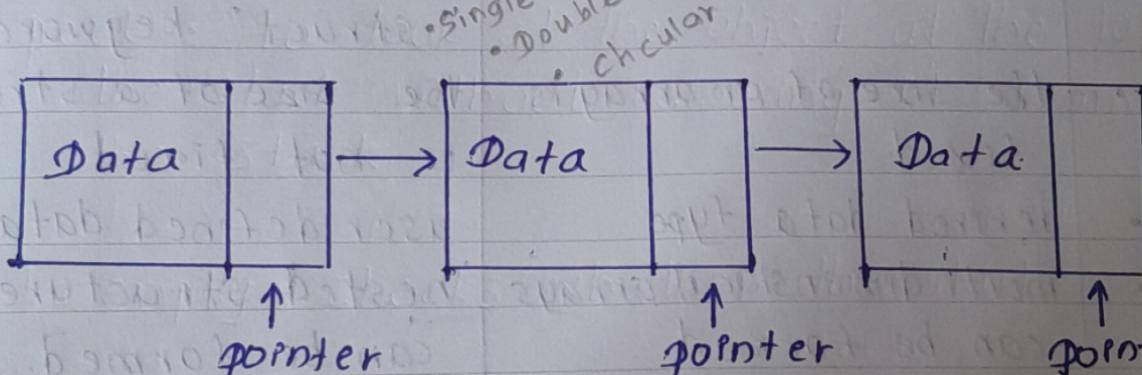
Stack is a LIFO structure.

Queue is a FIFO structure with one entry and one exit point.

Binary search tree.

Binary tree.

Q-04) What is a linked list data structure?



A linked list is a collection of "nodes" connected via links.

Q-05) What is a recursive data structure?
A data structure that is partially composed of smaller or simpler instances of the same data structure.

Basic components of linked lists
ex-g Linked Lists.
Binary trees

list : Node
 : Head
 : Tail

Q-06) Compare and contrast linear data structures vs non-linear data structures?

linear data	non linear
<ul style="list-style-type: none"> • simpler • single level • ex- array, stack, linked list • effective • deletion is possible 	<ul style="list-style-type: none"> • complex • multiple level • tree and graph • effective • deletion is not possible

