

DATA STRUCTURES STUDY MATERIAL

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Data Structure

DATA STRUCTURES :

Data Structure is a particular way of storing and organizing data in a computer's memory so that the data can be efficiently accessed.

What is the need of DATA STRUCTURE?

If we make any program using suitable Data Structure then it will be efficient in terms of Time and Space complexity. Which means we will get efficient access of data.

What are the various types of Data Structure ?

There are two types of Data Structure :

1. Primitive Data Structure.
2. Non-Primitive Data Structure.



PRIMITIVE DATA STRUCTURE:

Primitive Data Structures are those Data Structures which can store only single value.

Example : int, float, char, bool, pointer, etc .

NON - PRIMITIVE DATA STRUCTURE:

Non-Primitive Data Structure are those Data Structures which are derived from Primitive Data Structures.

They are further categorized into two types:

1. Linear Data Structure.
2. Non-Linear Data Structure.

LINEAR DATA STRUCTURE :

Those Data Structure in which one element is connected to only one other element are called Linear Data Structure.

Example : Array, Structure, Stack, Queue, linked list.

NON - LINEAR DATA STRUCTURE:

Those Data Structure in which one element is connected to multiple element are called Non-Linear Data Structure.

Example : Tree, Graph, Heap