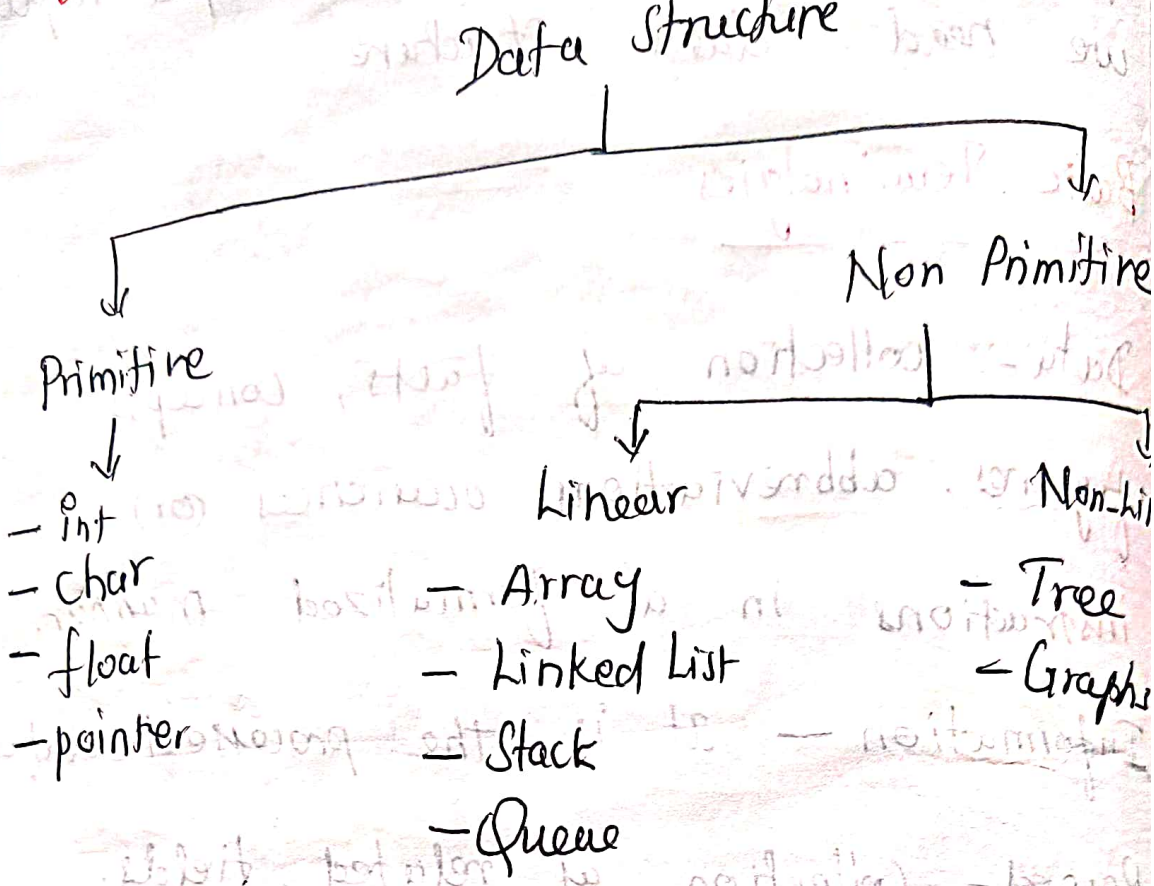
Types of Data Structures



Primitive Data Structures

It is a basic data structures which can be directly operated by machine instruction.

Non Primitive Data Structures

Data structure emphasis on structuring of group of heterogeneous or homogeneous data items.

Linear Data structures

Representing data in order or arranging element in order.

Non Linear DS

Hierarchical representation of data.

Abstract Data Type (ADT)

→ Extension of modular design

→ Break the program down into modules.

→ A modules are logical unit, small in size and does a specific job.

Advantage of modular design

→ Make changes easier

→ people work on modules simultaneously.

→ Easier to debug.

Definition:

ADT is a set of operations mathematical abstraction but not detail about how the set of operations is implemented. This can be viewed as extension of modular design.

Language supporting ADT

- C
- C++
- Java
- python
- C#

Function of ADT

→ What can be done with the data not how it is done.

An abstract data type is a data declaration packaged together with the operations that are meaningful