# Chapter 1 – Basics

## What are data structures

* When we deal with data structures, we deal with the memory management.
* How efficiently we can organize and store data in memory
* Here memory is RAM not your hard disk.
* We always consider time complexity and space complexity when we select a data structure.
* Time complexity is indicated by O(1), O(n), etc.
* There are 4 operations which we perform on the data – CRUD – Create, Read, Update and Delete.
* Find out the time complexity for these operations for all the data structures to select the proper one for the given problem statement.
* Algorithms is the pseudo code which is nothing but the logic. Data structure’s time complexity can be determined by seeing how many operations is required for any of the CRUD.

## Arrays

* <

## Linked List

* <

## Stack

* B

## Queue

* I

## Hash Map

* J