Introduction to DSA:

Data structure is a form of Organising, Processing and Storing the data in the memory.

• There is a need of Data structures in programming to achieve efficiency in operations like addition, deletion, traversal, searching, sorting, etc.

• Linear/Basic Data Structures :

1. Array 2. Linked List 3. Stack 4. Queue 5. Hash Tables

•Non-linear/Advanced Data Structures :

1. Tree 2. Graph

Time complexity:

Asymptotic analysis: it is a mathematical way to calculate time complexity and space complexity of

an algorithm without implementing it in any programming language. –

comparisons taking place in different cases.

• there are 3 asymptotic notations:

• 1. Big Omega ( Ω ) - best case time complexity - asymptotic lower bound.

• 2. Big Oh ( O ) - worst case time complexity - asymptotic upper bound.

• 3. Big Theta ( θ ) - average case time complexity - asymptotic tight bound

































