

Introduction to Linked List

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WHAT IS A LINKED LIST

Linked List is a linear data structure in which the elements are not in contiguous memory locations.

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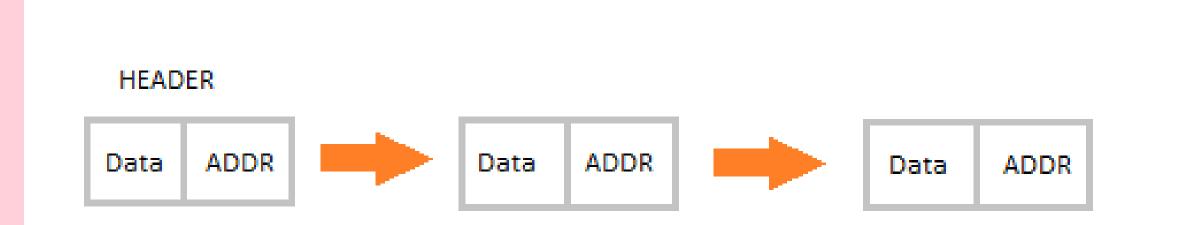
It consists of group of **nodes** in a sequence.

Each node holds its own data and the address of the next node hence forming a chain like structure.

Linked Lists are used to create trees and graphs.









Advantages and Disadvantages of Linked List



- Insertion and deletion operations can be easily implemented.
- Stacks and queues can be easily executed.



- The memory is wasted as pointers require extra memory for storage.
- No element can be accessed randomly; it has to access each node sequentially.

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APPLICATIONS OF LINKED LIST

- Linked lists are used to implement stacks, queues, graphs, etc.
- Linked lists let you insert elements at the beginning and end of the list.
- In Linked Lists we don't need to know the size in advance.





TYPES OF LINKED LISTS

There are 3 different implementations of Linked List available, they are:

- 1. Singly Linked List
- 2. Doubly Linked List
- 3. Circular Linked List