

Exercise 1

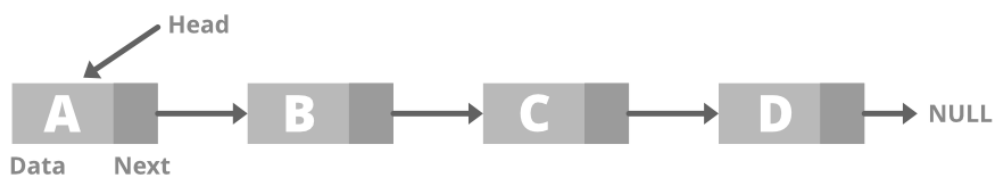
Introduction to Linked Lists

A linked list is a sequence of data structures connected via links. Linked lists are essentially sequences of lists containing items. Each link contains a connection to other links. Linked lists are considered the second most commonly used data structure after arrays.

Displaying a linked list

A linked list can be represented as a chain of nodes, where each node points to the next node.

Singly Linked List



Important Points About Linked Lists

In a linked list, the following points are crucial:

- The linked list comprises a crucial element known as the head (or first).
- Each link within the list contains both data fields and a link field called "next."
- Links within the list are interconnected using the "next" link.
- When a link has a null link, it indicates the end of the list.

Application of Linked Lists

Linked lists have numerous applications in computer science and software development due to their flexibility and efficiency in certain scenarios. They are often used in dynamic memory allocation systems, where memory blocks are allocated and deallocated as needed. Additionally, linked lists serve as fundamental building blocks for implementing other data structures like stacks, queues, and graphs. Their versatility in managing and manipulating data makes them essential components in various software systems and algorithms. To explore more about linked lists, visit [GeeksforGeeks - Types of Linked Lists](#).