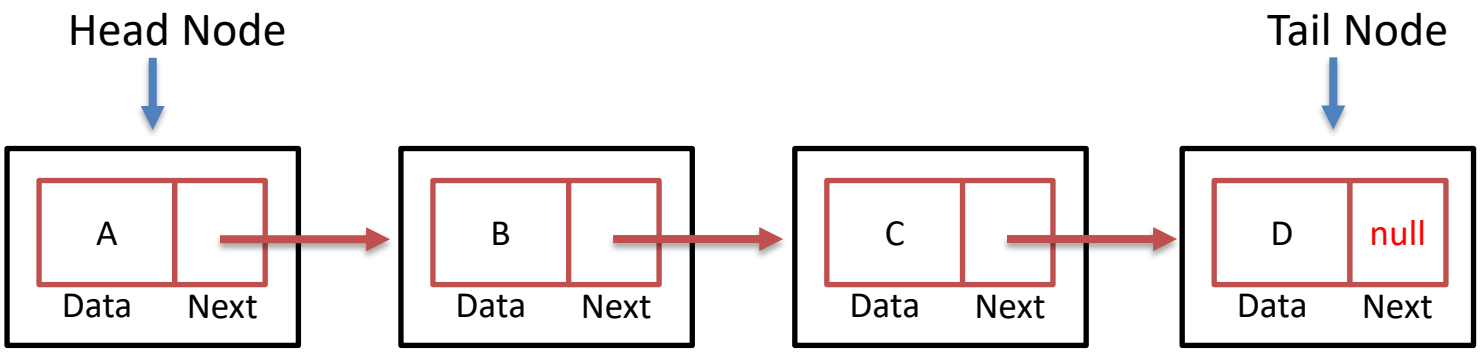
Linked List

- Linked List is a data structure that stores elements in a non-contiguous location. It is a linear data structure.
- Each data item is called a ‘Node’ and each node has a data part and an reference part. The reference part stores the link to the next node in the LinkedList.

Types of Linked List:

- Singly Linked List
- Singly Circular Linked List
- Doubly Linked List
- Doubly Circular Linked List

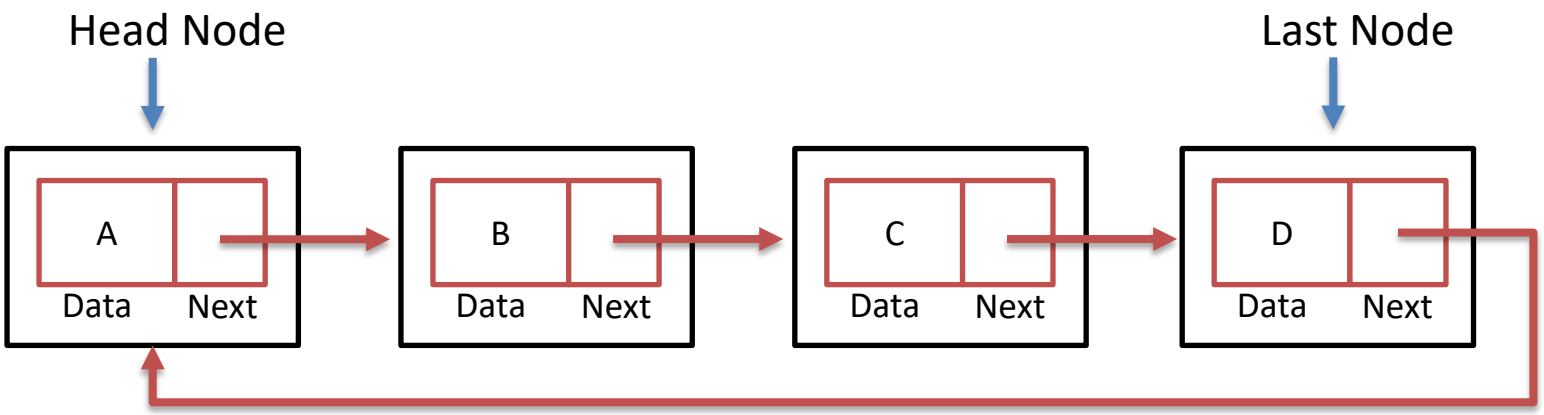
Singly Linked List



The **Head** of the LinkedList contains the reference/address of the first element in the LinkedList. The last node in the LinkedList is the **Tail**.

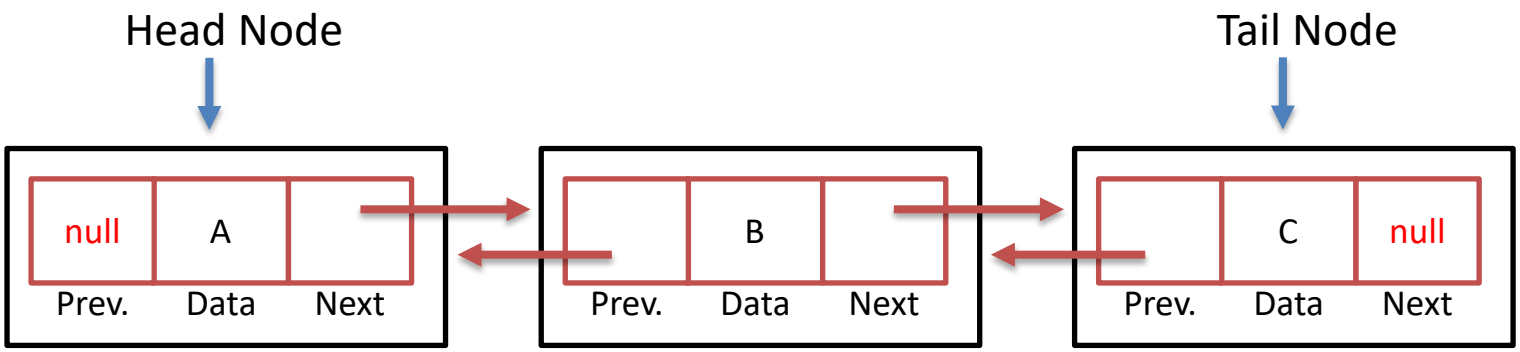
Singly-linked List stores the reference of only the next node in the LinkedList. The Last node does not refer any node that means last node contains “null” as next value.

Singly Circular Linked List



In the **Singly Circular Linked List**, the last node in the LinkedList contains the reference of the head node in the LinkedList.

Doubly Linked List

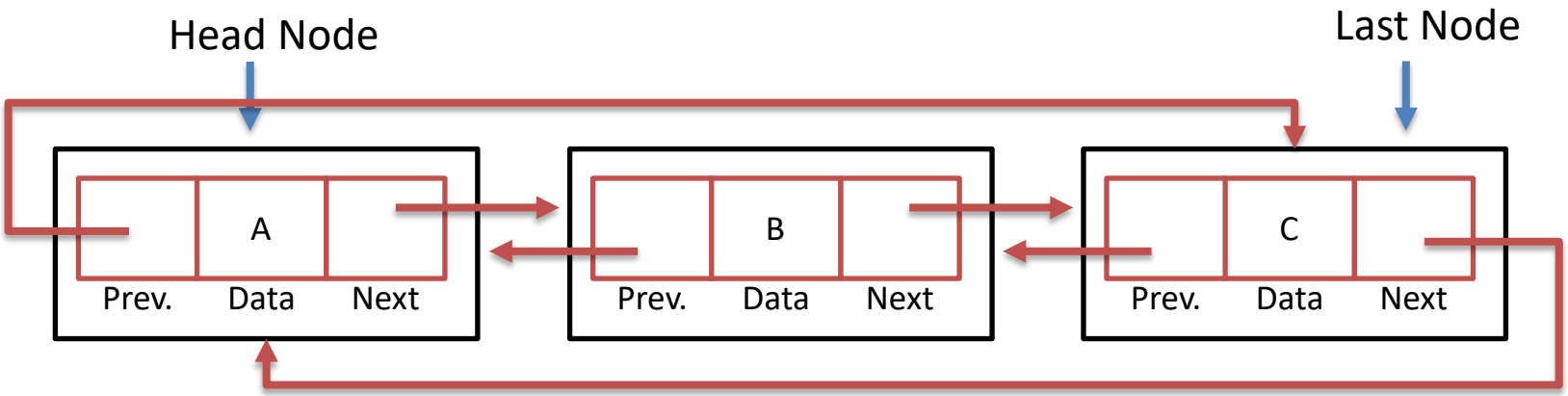


In **Doubly Linked List**, each node has three parts:

1. Reference to the previous node in the LinkedList.
2. Data part
3. Reference to the next node in the LinkedList.

The previous value of the first/head node in the LinkedList will be set to “null” and the next value of the last/tail node in the LinkedList is set to “null”.

Doubly Circular Linked List



The **Circular Doubly Linked List** is a combination of the Doubly Linked List and the Circular Linked List. It means that the last node in the Doubly Linked List contains the reference of the first/head node and first node contains the reference of last node.