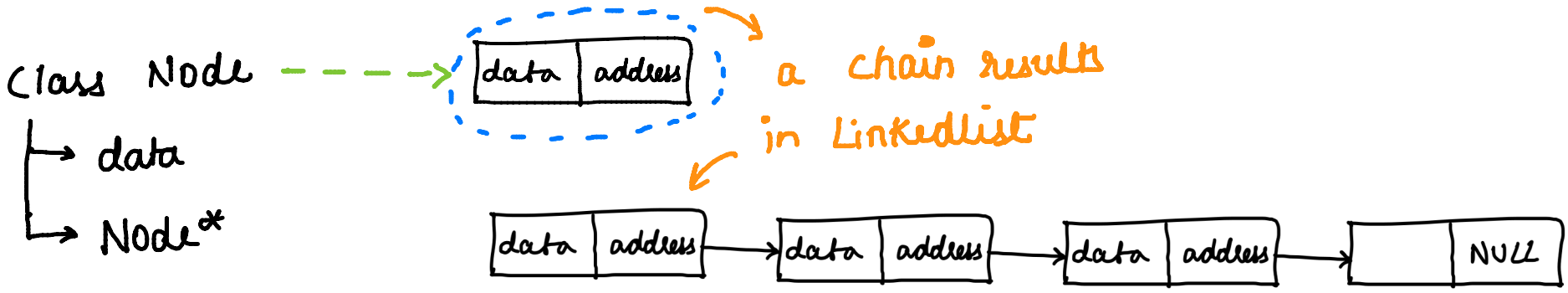
Linked List

Contents →

Linked List

Linkedlist is linear data structure, which consists of a group of nodes in a sequence.



Advantages

1. Dynamic nature
2. Optimal insertion & deletion
3. Stacks and queues can be easily implemented
4. No memory wastage

Disadvantages

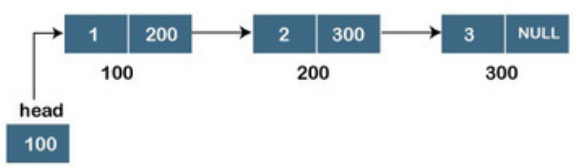
1. More memory usage due to address pointer.
2. Slow traversal compared to arrays.
3. No reverse traversal in singly linked list
4. No random access.

Real life Applications

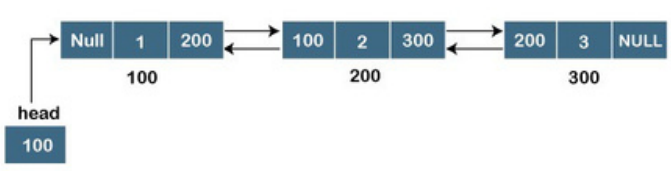
1. Previous & next page in browser
2. Image Viewer
3. Music player

Types

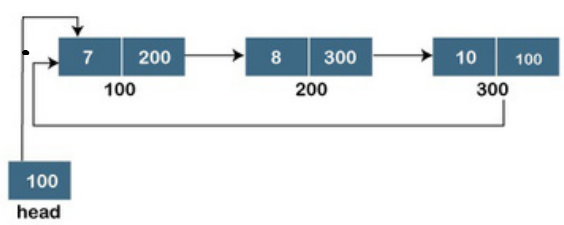
1. Singly linkedlist



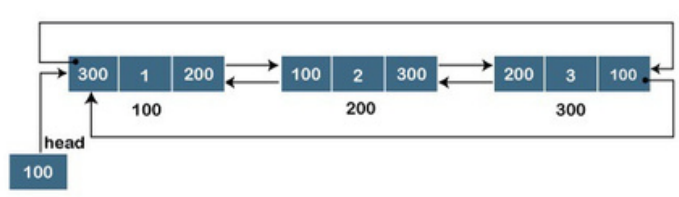
2. Doubly linkedlist



3. Circular Linkedlist



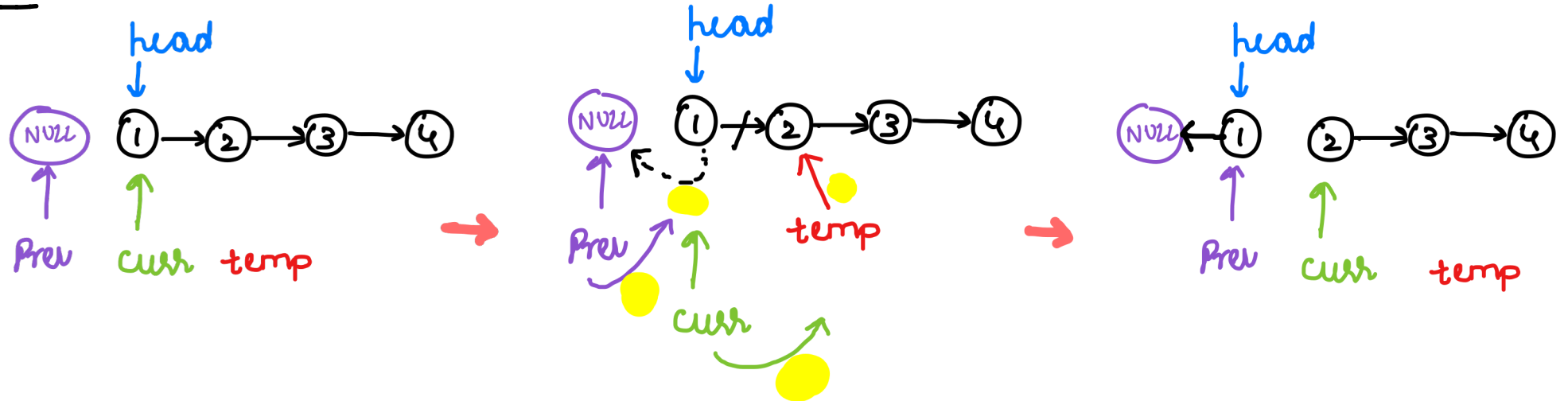
4. Doubly circular linkedlist

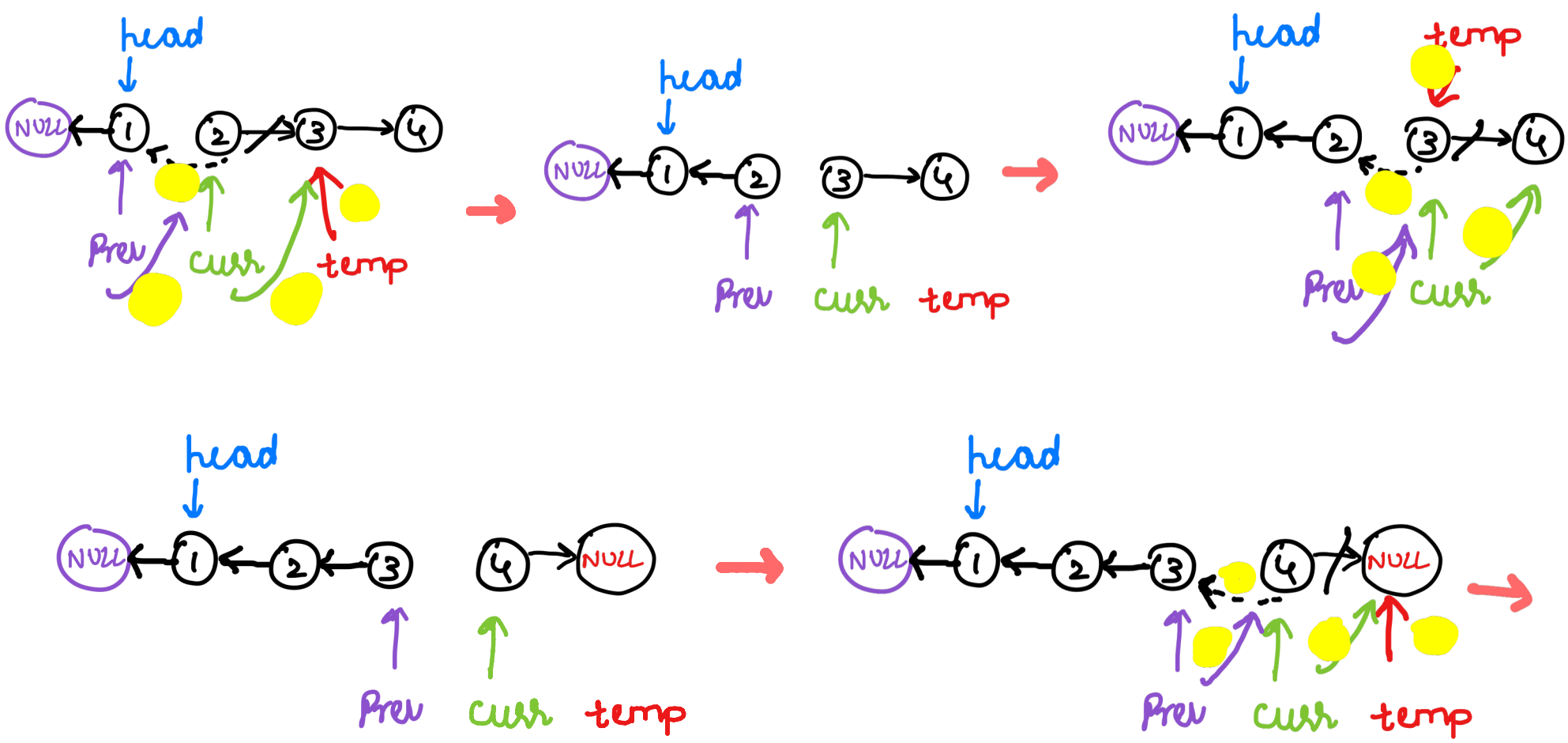


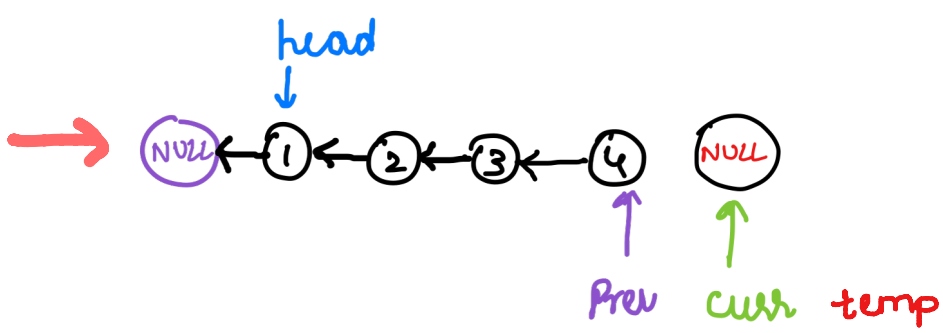
① Reverse a linkedlist → Given a linkedlist, return reversed list.

Eg 1 → 2 → 3 → 4 ⇒ 4 → 3 → 2 → 1

Sol)







→ As curr points to NULL, we reached end of linkedlist

→ Return Prev as it is the starting pointer of reversed list.