SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

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DEPARTMENT OF COMPUTER SCIENCE AND DESIGN

COURSE NAME : 19CS307 - DATA STRUCTURES

II YEAR / III SEMESTER

Unit 1- LINEAR DATA STRUCTURES

Singly Linked List

Printing each node data/Traverse in a linked list

To print each node's data, we have to traverse the linked list till the end.

Algorithm

1. Create a temporary node (temp) and assign the head node's address.
2. Print the data which present in the temp node.
3. After printing the data, move the temp pointer to the next node.
4. Do the above process until we reach the end.

Printing each node data/Traverse in a linked list

To print each node's data, we have to traverse the linked list till the end.
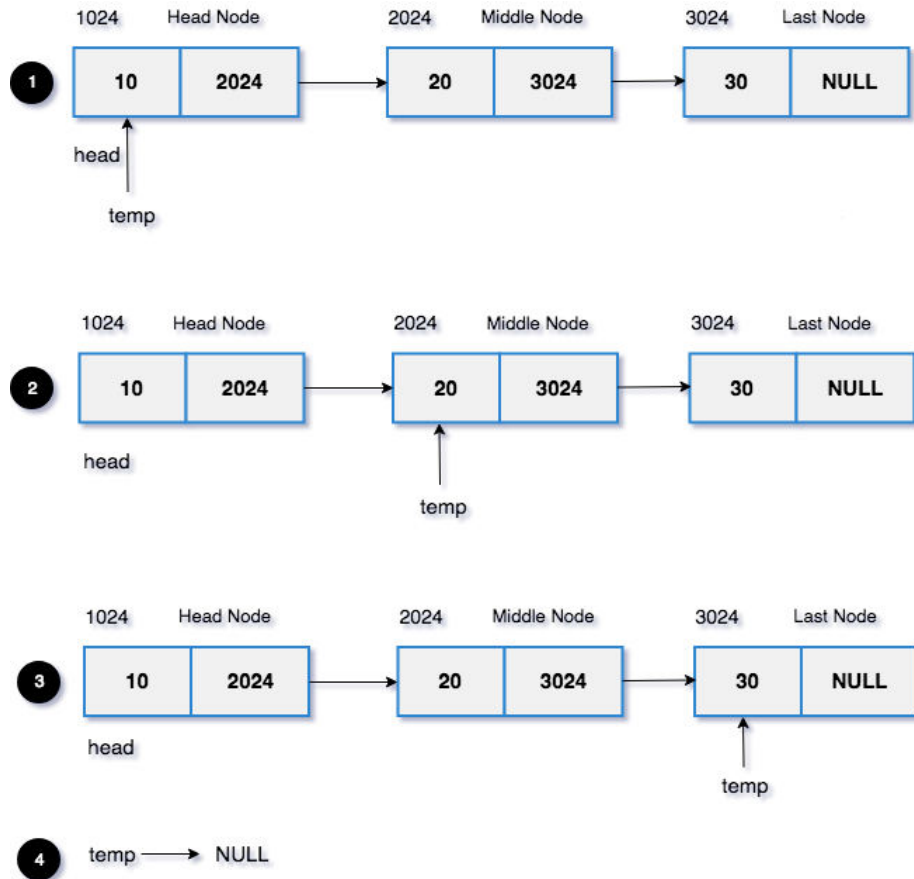
Algorithm

1. temp points to the head node. temp => data = 10 will be printed. temp will point to the next node (Middle Node).
2. temp != NULL. temp => data = 20 will be printed. Again temp will point to the next node (Last Node).
3. temp != NULL. temp => data = 30 will be printed. Again temp will point to the next node which is NULL.
4. temp == NULL. Stop the process we have printed the whole linked list.

Printing each node data/Traverse in a linked list

Why do we need to use the temp node instead head?
If we use the head pointer instead of the temp while printing the linked list, we will miss the track of the starting node. (After printing the data head node will point the NULL).

To avoid that, we should not change the head node's address while processing the linked list. We should always use a temporary node to manipulate the linked list.

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THANK YOU