

Reverse alternate nodes in Link List

Given a linked list, you have to perform the following task:

1. Extract the alternative nodes starting from second node.
2. Reverse the extracted list.
3. Append the extracted list at the end of the original list.

Note: Try to solve the problem without using any extra memory.

Example 1:

Input:

LinkedList = 10->4->9->1->3->5->9->4

Output:

10 9 3 9 4 5 1 4

Explanation:

Alternative nodes in the given linked list are 4,1,5,4. Reversing the alternative nodes from the given list, and then appending them to the end of the list results in a list 10->9->3->9->4->5->1->4.

Example 2:

Input:

LinkedList = 1->2->3->4->5

Output:

1 3 5 4 2

Explanation:

Alternative nodes in the given linked list are 2 and 4. Reversing the alternative nodes from the given list, and then appending them to the end of the list results in a list 1->3->5->4->2.

Your Task:

You don't have to read input or print anything. Your task is to complete the function **rearrange()** which takes the head of the linked list as input and rearranges the list as required.

Expected Time Complexity: $O(N)$

Expected Auxiliary Space: $O(1)$

Constraints:

$1 \leq N \leq 10^5$

$0 \leq \text{Node_value} \leq 10^9$