Problem List

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1474. Delete N Nodes After M Nodes of a Linked List Premium

Solved

Easy Topics Companies Hint

You are given the `head` of a linked list and two integers `m` and `n`.

Traverse the linked list and remove some nodes in the following way:

- Start with the head as the current node.
- Keep the first `m` nodes starting with the current node.
- Remove the next `n` nodes
- Keep repeating steps 2 and 3 until you reach the end of the list.

Return *the head of the modified list after removing the mentioned nodes.*

Example 1:


```
Input: head = [1,2,3,4,5,6,7,8,9,10,11,12,13], m = 2, n = 3
Output: [1,2,6,7,11,12]
Explanation: Keep the first (m = 2) nodes starting from the head of the linked List  (1 ->2)
show in black nodes.
Delete the next (n = 3) nodes (3 -> 4 -> 5) show in read nodes.
Continue with the same procedure until reaching the tail of the Linked List.
Head of the linked list after removing nodes is returned.
```

Example 2:

```
Input: head = [1,2,3,4,5,6,7,8,9,10,11], m = 1, n = 3
Output: [1,5,9]
Explanation: Head of linked list after removing nodes is returned.
```

Constraints:

- The number of nodes in the list is in the range `[1, 10^4]`.
- `1 <= Node.val <= 10^6`
- `1 <= m, n <= 1000`

Follow up: Could you solve this problem by modifying the list in-place?

Seen this question in a real interview before? 1/5

Yes No

Accepted 31.1K | Submissions 42.5K | Acceptance Rate 73.1%

Topics

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Hint 1

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401 1

Code

Python3 • Auto

```python
# Definition for singly-linked list.
# class ListNode:
#     def __init__(self, val=0, next=None):
#         self.val = val
#         self.next = next
class Solution:
    def deleteNodes(self, head: ListNode, m: int, n: int) -> ListNode:

        root = head
        index = 0

        while head.next:
            index += 1
            if index % (m + n) < m:
                head = head.next
            else:
                head.next = head.next.next

        return root
```

Saved Ln 5, Col 27

Testcase | Test Result

Accepted Runtime: 35 ms

• Case 1 • Case 2

Input

head =
[1,2,3,4,5,6,7,8,9,10,11,12,13]

m =
2

n =
3