

61. Rotate List

Initial thoughts:

61. Rotate List

Medium

2222

1147

Add to List

Share

Given the head of a linked list, rotate the list to the right by k places.

Example 1:



rotate 1



rotate 2



Input: head = [1,2,3,4,5] k = 2

Output: [4,5,1,2,3]

- 1.
2. To use two pointers and travel the 2nd pointer till k steps and then travel two pointers until the 2nd pointer.next is null

Python Code:

```
class Solution:
    def rotateRight(self, head: ListNode, k: int) -> ListNode:
        if not head:
            return head

        # Get length
        length, tail = 1, head
        while tail.next:
            tail = tail.next
            length += 1

        k = k % length
        if k == 0:
            return head

        # Move to the pivot and rotate
        cur = head
        for i in range(length - k - 1):
            cur = cur.next
        newHead = cur.next
        cur.next = None
        tail.next = head
        return newHead
```

- 1.
2. Basically the approach is the same...to move the 2nd pointer k steps
3. But what if the k is larger than the length of the array? To solve this we have divided k with length to get the required number of rotations
4. Next we'll move our first pointer till "length - k - 1"
5. Now our new head will be curr.next
6. See code and get the idea