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Class: SE3
Roll no :42

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class ListNode:
    def __init__(self, val=0, next=None):
        self.val = val
        self.next = next

def rotateRight(head, k):
    if not head or not head.next or k == 0:
        return head

    length = 1
    tail = head
    while tail.next:
        tail = tail.next
        length += 1

    tail.next = head
    k = k % length
    steps = length - k

    for _ in range(steps):
        tail = tail.next

    new_head = tail.next
    tail.next = None
    return new_head

def list_to_linked_list(lst):
    head = ListNode(lst[0])
    current = head
    for val in lst[1:]:
        current.next = ListNode(val)
        current = current.next
    return head

def linked_list_to_list(head):
    result = []
    while head:
        result.append(head.val)
        head = head.next
    return result

head1 = list_to_linked_list([1, 2, 3, 4, 5])
rotated1 = rotateRight(head1, 2)
print(linked_list_to_list(rotated1))

head2 = list_to_linked_list([0, 1, 2])
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rotated2 = rotateRight(head2, 4)
print(linked_list_to_list(rotated2))
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[4, 5, 1, 2, 3]
[2, 0, 1]
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