

Rotate List

Question: Given a list, rotate the list to the right by k places, where k is non-negative.

For example:

Given 1->2->3->4->5->NULL and k = 2,

return 4->5->1->2->3->NULL

Solutions:

```
class ListNode(object):
```

```
    def __init__(self, x):
```

```
        self.val = x
```

```
        self.next = None
```

```
    def to_list(self):
```

```
        return [self.val] + self.next.to_list() if self.next else [self.val]
```

```
class Solution:
```

```
    # @param head, a ListNode
```

```
    # @param k, an integer
```

```
    # @return a ListNode
```

```
    def rotateRight(self, head, k):
```

```
        if head == None:
```

```
            return None
```

```
        temp = head
```

```
        for i in range(0,k):
```

```
            if temp.next == None:
```

```
                temp = head
```

```
    else:
        temp = temp.next
    newLast = head
    while temp.next != None:
        temp = temp.next
        newLast = newLast.next
    temp.next = head
    newHead = newLast.next
    newLast.next = None
    return newHead
```

```
if __name__ == "__main__":
    n1 = ListNode(1)
    n2 = ListNode(2)
    n3 = ListNode(3)
    n4 = ListNode(4)
    n5 = ListNode(5)
    n1.next = n2
    n2.next = n3
    n3.next = n4
    n4.next = n5
    r = Solution().rotateRight(n1, 2)
    print ( r.to_list() )
```