

Prompt	Scratchpad	Our Solution(s)	Video Explanation	Run Code
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Solution 1

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1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 ▾ class Program {
4 ▾ class LinkedList {
5     var value: Int
6     var next: LinkedList?
7
8 ▾     init(value: Int) {
9         self.value = value
10        next = nil
11    }
12 }
13
14 // O(n) time | O(1) space - where n is the number of nodes in the Linked List
15 ▾ static func shiftLinkedList(_ head: LinkedList, _ k: Int) -> LinkedList? {
16     var listLength = 1
17     var listTail = head
18
19 ▾     while let next = listTail.next {
20         listTail = next
21         listLength += 1
22     }
23
24     var offset = abs(k) % listLength
25 ▾     if offset == 0 {
26         return head
27     }
28
29     var newTailPosition = listLength - offset
30 ▾     if k <= 0 {
31         newTailPosition = offset
32     }
33
34     var newTail: LinkedList = head
35 ▾     for i in 1 ..< newTailPosition {
36         newTail = newTail.next!
37     }
38
39     var newHead = newTail.next
40     newTail.next = nil
41     listTail.next = head
42     return newHead
43 }
44 }
45
```

