

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
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        }
11    }
12
13    // O(n) time | O(1) space
14    func reverseLinkedList(_ head: LinkedList) -> LinkedList {
15        var firstPointer: LinkedList?
16        var secondPointer: LinkedList? = head
17
18        while secondPointer != nil {
19            let thirdPointer = secondPointer?.next
20            secondPointer?.next = firstPointer
21            firstPointer = secondPointer
22            secondPointer = thirdPointer
23        }
24
25        return firstPointer!
26    }
27 }
28
```

Solution 1   Solution 2   Solution 3

```
1 class Program {
2     // This is an input class. Do not edit.
3     class LinkedList {
4         var value: Int
5         var next: LinkedList?
6
7         init(value: Int) {
8             self.value = value
9         }
10    }
11
12    func reverseLinkedList(_ head: LinkedList) -> LinkedList {
13        // Write your code here.
14        return head // replace me
15    }
16 }
17
```

Our Tests

```
1 class ProgramTests {
2     testProgram() {
3         let head = Program().LinkedList(1)
4         head.next = Program().LinkedList(2)
5         head.next?.next = Program().LinkedList(3)
6         head.next?.next?.next = Program().LinkedList(4)
7         head.next?.next?.next?.next = Program().LinkedList(5)
8         head.next?.next?.next?.next?.next = Program().LinkedList(6)
9         let reversedHead = Program().reverseLinkedList(head)
10        let reversedList = Program().LinkedList(6)
11        reversedList.next = Program().LinkedList(5)
12        reversedList.next?.next = Program().LinkedList(4)
13        reversedList.next?.next?.next = Program().LinkedList(3)
14        reversedList.next?.next?.next?.next = Program().LinkedList(2)
15        reversedList.next?.next?.next?.next?.next = Program().LinkedList(1)
16    }
17}
```

Custom Output

Submit Code

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
```

