

연결 리스트를 입력받아 페어 단위로 스왑하라.

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

Output: [2,1,4,3]

# Definition for singly-linked list.

# class ListNode:

# def \_\_init\_\_(self, val=0, next=None):

# self.val = val

# self.next = next

1.값만 교환

class Solution:

def swapPairs(self, head: ListNode) -> ListNode:

result = head

while head and head.next:

head.val, head.next.val = head.next.val, head.val

head = head.next.next

return result

2.반복

class Solution:

def swapPairs(self, head: ListNode) -> ListNode:

root = prev = ListNode(None)

prev.next = head

while head and head.next:

b = head.next

head.next = b.next

b.next = head

prev.next = b

head = head.next

prev = prev.next.next

return root.next

3.재귀

class Solution:

def swapPairs(self, head: ListNode) -> ListNode:

if head and head.next:

p = head.next

head.next = self.swapPairs(p.next)

p.next = head

return p

return head

class Solution:

def swap(self, node: ListNode, next:ListNode) -> ListNode:

if not node or not node.next:

return node

nnext = next.next

nnnext = None

if next.next:

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        nnext = next.next.next
        node.next, next.next = self.swap(nnext, nnext), node
    return next
def swapPairs(self, head: ListNode) -> ListNode:
    if not head or not head.next:
        return head
    head = self.swap(head, head.next)
    return head
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