

Linked List

Buddhi and Siddhi are playing a game. The game is about to find the code through which the door of a secret room can be opened. There are some clues written in a paper and were kept in different places of home. There are two clues totally. They find the first clue in the form a linked list with numbers. In Second clue it is mentioned to rotate the linked list by four times in counter-clockwise direction. Finally by entering the code obtained after rotation will open the door of a secret room. Help them in finding the code.

Input:

10 20 30 40 50 60

Output:

50 60 10 20 30 40

Time Complexity: $O(n)$

Solution:

```
class Node:
    def __init__(self, data):
        self.data = data
        self.next = None
class LinkedList:
    def __init__(self):
        self.head = None
    def push(self, new_data):
        new_node = Node(new_data)
        new_node.next = self.head
        self.head = new_node
    def printList(self):
        temp = self.head
        l=[]
        while(temp):
            l.append(temp.data)
            temp = temp.next
        print(*l)
    def rotate(self, k):
        current = self.head
        count = 1
```

```
while(count < k and current is not None):
    current = current.next
    count += 1
if current is None:
    return

kthNode = current
while(current.next is not None):
    current = current.next

current.next = self.head
self.head = kthNode.next
kthNode.next = None
l=[int(x) for x in input().split()]
l1 = LinkedList()
for i in range(len(l)-1,-1,-1):
    l1.push(l[i])
l1.rotate(4)
l1.printList()
```