class Solution:

def mergeTwoLists(self, list1: Optional[ListNode], list2: Optional[ListNode]) -> Optional[ListNode]:

cur = dummy = ListNode()

while list1 and list2:

if list1.val < list2.val:

cur.next = list1

list1, cur = list1.next, list1

else:

cur.next = list2

list2, cur = list2.next, list2

if list1 or list2:

cur.next = list1 if list1 else list2

return dummy.next