class Solution:

def nextPermutation(self, nums: List[int]) -> None:

"""

Do not return anything, modify nums in-place instead.

"""

n=len(nums)

pivot=-1

for i in range(n-2,-1,-1):

if nums[i]<nums[i+1]:

pivot=i

break

if pivot==-1: #if given permutation is lexi last, return first

nums.reverse()

return

for j in range(n-1,pivot,-1):

if nums[j]>nums[pivot]:

nums[j], nums[pivot]=nums[pivot], nums[j]

break

l, r = pivot+1, n-1

while l<r:

nums[l],nums[r]=nums[r],nums[l]

l+=1

r-=1