Stack:

Rahul's friend Harry is excited to see his Dad fight Dementors and rescue him and his Godfather Raj. Meanwhile their friend Feroj is stuck on some silly arrays problem.
Harry does not have time for all this, so he asked Rahul to solve that problem for Feeroj, so that they can go.

The problem is given an array A having N integers, for each i (1<=i<=N), find x+y, where x is the largest number less than i such that A[x]>A[i] and y is the smallest number greater than i such that A[y]>A[i]. If there is no x<i such that A[x]>A[i] , then take x=-1 .
Similarly, if there is no y>i such that A[y]>A[i], then take y=-1.

Input Format:
First line consists of a single integer denoting N.
Second line consists of N space separated integers denoting the array A.

Output Format:
Print N space separated integers, denoting x+y for each i(1<=i<=N)

Sample input:

5
5 4 1 3 2

Sample output:

-2 0 6 1 3

Explanation:

Values of x for each i:-1,1,2,2,4
Values of y for each i:-1,-1,4,-1,-1
So x+y for each i:-2,0,6,1,3

Solution:

```
n=int(input())
arr=list(map(int,input().split()))
#for x
ansx=[]
```

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stack=[]
indx=0
while indx<n:
    if len(stack)==0:
        ansx.append(-1)
    else:
        while stack:
            if arr[stack[-1]]>arr[indx]:
                ansx.append(stack[-1]+1)
                break
            stack.pop()
        else:
            ansx.append(-1)
    stack.append(indx)
    indx+=1
#for y
ansy=[]
stack=[]
indx=n-1
while indx>=0:
    if len(stack)==0:
        ansy.append(-1)
    else:
        while stack:
            if arr[stack[-1]]>arr[indx]:
                ansy.append(stack[-1]+1)
                break
            stack.pop()
        else:
            ansy.append(-1)
    stack.append(indx)
    indx-=1
ansy=ansy[::-1]
for i in range(n):
    print(ansx[i]+ansy[i],end=" ")
```