

Advanced Programming Practices

Hackerrank Week-11

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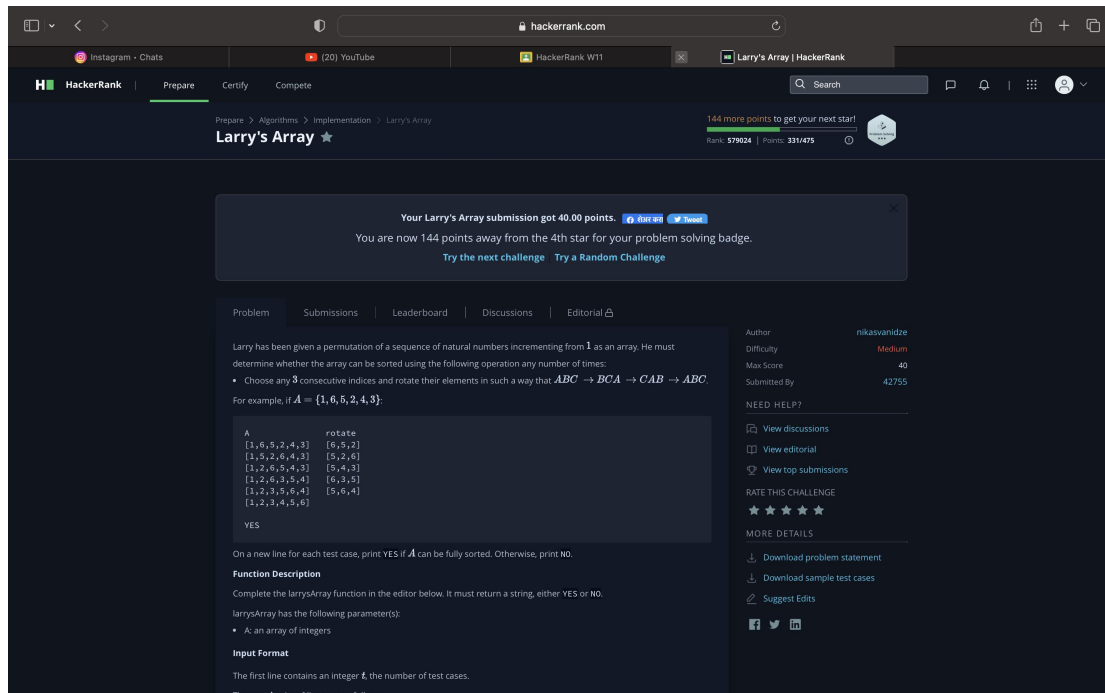
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Section: T2

Branch: CSE w/s OT

Ques 1: Larry's Array

Problem:



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Prepare > Algorithms > Implementation > Larry's Array

Larry's Array ★

144 more points to get your next star!

Rank: 579024 | Points: 331/475

Your Larry's Array submission got 40.00 points. You are now 144 points away from the 4th star for your problem solving badge. Try the next challenge Try a Random Challenge

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Larry has been given a permutation of a sequence of natural numbers incrementing from 1 as an array. He must determine whether the array can be sorted using the following operation any number of times:

- Choose any 3 consecutive indices and rotate their elements in such a way that $ABC \rightarrow BCA \rightarrow CAB \rightarrow ABC$.

For example, if $A = \{1, 6, 5, 2, 4, 3\}$:

A	rotate
$\{1, 6, 5, 2, 4, 3\}$	$\{6, 5, 2\}$
$\{1, 5, 2, 6, 4, 3\}$	$\{5, 2, 6\}$
$\{1, 2, 6, 5, 4, 3\}$	$\{5, 4, 3\}$
$\{1, 2, 6, 3, 5, 4\}$	$\{6, 3, 5\}$
$\{1, 2, 3, 5, 6, 4\}$	$\{5, 6, 4\}$
$\{1, 2, 3, 4, 5, 6\}$	

YES

On a new line for each test case, print YES if A can be fully sorted. Otherwise, print NO.

Function Description

Complete the `larrysArray` function in the editor below. It must return a string, either YES or NO.

`larrysArray` has the following parameter(s):

- A : an array of integers

Input Format

The first line contains an integer t , the number of test cases.

The next t pairs of lines are as follows:

Author: nikasvanidze
Difficulty: Medium
Max Score: 40
Submitted By: 42755

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Code:

```
import sys

def canSort(l):
    s = sorted(l)
    for i in s[:-2]:
        if l.index(i) % 2:
            l.remove(i)
            l[0], l[1] = l[1], l[0]
        else:
            l.remove(i)
    if l[0] < l[1]:
        return True
```

```
else:
    return False
```

```
if __name__ == "__main__":
    t = int(sys.stdin.readline().strip())
    for _ in range(t):
        n = int(sys.stdin.readline().strip())
        A = list(map(int, sys.stdin.readline().split()))
        if canSort(A):
            print("YES")
        else:
            print("NO")
```

Output:

The screenshot shows the HackerRank interface for the 'Larry's Array' problem. At the top, there's a browser tab for 'hackerrank.com' and a sub-tab for 'Larry's Array | HackerRank'. Below the tabs, there's a code editor area with a dark theme. The code is Python, and the cursor is at Line 24, Col: 24. Below the code editor, there are buttons for 'Upload Code as File', 'Test against custom input', 'Run Code', and 'Submit Code'. A notification banner states: 'You have earned 40.00 points! You are now 144 points away from the 4th star for your problem solving badge. 48% 331/475'. Below this, a green 'Congratulations' banner says: 'You solved this challenge. Would you like to challenge your friends?' with social media icons and a 'Next Challenge' button. The bottom section shows a list of test cases (Test case 0 to Test case 7) on the left. The right side shows the 'Compiler Message' as 'Success' and the 'Input (stdin)' as:

```
3
3
3 1 2
4
1 3 4 2
5
1 2 3 5 4
```