

Hackerrank username: s_maisiba

The screenshot displays the Hackerrank interface for the 'Closest Numbers' problem. The user, s_maisiba, has successfully solved the problem, earning 35.00 points. A notification banner at the top states: 'Your Closest Numbers submission got 35.00 points. You are now 64 points away from the 2nd star for your problem solving badge.' The problem description explains that the task is to find the minimum absolute difference between any two elements in an array. An example array [5, 2, 3, 4, 1] is provided, along with its sorted version [1, 2, 3, 4, 5] and the resulting pairs with minimum differences: [(1, 2), (2, 3), (3, 4), (4, 5)]. The user's submission is shown as successful, with a 'Success' compiler message. The test cases are all passed, and the input/output for the first test case is displayed: Input (stdin) shows 10 and a list of numbers, while Expected Output shows -20 30. The user's rank is 1682134 and their score is 36/100.

HackerRank PRACTICE CERTIFICATION COMPETE JOBS LEADERBOARD

Practice > Algorithms > Sorting > Closest Numbers

Closest Numbers ☆

Rank: 1682134 | Points: 36/100

64 more points to get your next star!

Your Closest Numbers submission got 35.00 points. You are now 64 points away from the 2nd star for your problem solving badge.

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Sorting is useful as the first step in many different tasks. The most common task is to make finding things easier, but there are other uses as well. In this case, it will make it easier to determine which pair or pairs of elements have the smallest absolute difference between them.

Example

$arr = [5, 2, 3, 4, 1]$

Sorted, $arr' = [1, 2, 3, 4, 5]$. Several pairs have the minimum difference of 1: [(1, 2), (2, 3), (3, 4), (4, 5)]. Return the array [1, 2, 2, 3, 3, 4, 4, 5].

Note

As shown in the example, pairs may overlap.

Author: HackerRank
Difficulty: Easy
Max Score: 35
Submitted By: 58775

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You have earned 35.00 points! You are now 64 points away from the 2nd star for your problem solving badge.

Congratulations

You solved this challenge. Would you like to challenge your friends? f t in

Next Challenge

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5

Compiler Message

Success

Input (stdin)

1 10
2 -20 -3916237 -357920 -3620601 7374819 -7330761 30 6246457 -6461594 266854

Expected Output

1 -20 30

```
12 arr = sorted(arr)
13 minimum_difference = 10**18
14 for i in range(1, len(arr)):
15     absolute_difference = abs(arr[i-1] - arr[i])
16
17     if absolute_difference < minimum_difference:
18         output_list = [(arr[i-1], arr[i])]
19         minimum_difference = absolute_difference
20
21     elif absolute_difference == minimum_difference:
22         output_list.append((arr[i-1], arr[i]))
23
24 closest = [i for listed in output_list for i in listed]
25 return closest
26
27 if __name__ == '__main__':
28     fptr = open(os.environ['OUTPUT_PATH'], 'w')
29
30     n = int(input())
31
32     arr = list(map(int, input().rstrip().split()))
33
34     result = closestNumbers(arr)
35
36     fptr.write(' '.join(map(str, result)))
37     fptr.write('\n')
38
39     fptr.close()
40
```

`#!/bin/python3`

`import math`

`import os`

`import random`

`import re`

`import sys`

`# Complete the closestNumbers function below.`

`def closestNumbers(arr):`

`output_list = []`

`arr = sorted(arr)`

`minimum_difference = 10**18`

`for i in range(1, len(arr)):`

`absolute_difference = abs(arr[i-1] - arr[i])`

`if absolute_difference < minimum_difference:`

```
output_list = [(arr[i-1], arr[i])]
minimum_difference = absolute_difference
```

```
elif absolute_difference == minimum_difference:
    output_list.append((arr[i-1], arr[i]))
```

```
closest = [i for listed in output_list for i in listed]
return closest
```

```
if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')
```

```
n = int(input())
```

```
arr = list(map(int, input().rstrip().split()))
```

```
result = closestNumbers(arr)
```

```
fptr.write(' '.join(map(str, result)))
fptr.write('\n')
```

```
fptr.close()
```