https://course.acciojob.com/idle?question=082fec26-a7a3-4296-adc5-2f3fe9d99f12

- MEDIUM
- Max Score: 40 Points

132 Pattern

Given an array of `n` integers `nums`, a 132 pattern is a subsequence of three integers `nums[i]`, `nums[j]` and `nums[k]` such that `i < j < k` and `nums[i] < nums[k] < nums[j]`.

Return `true` if there is a 132 pattern in `nums`, otherwise, return `false`.

Input Format

Input consists of two lines.

First line contains an integer `n` which is the number of elements in `nums`.

Next line contains `n` spaced integers which represents the elements of `nums`.

Output Format

Return `true` if a 132 pattern is found otherwise return `false`.

Example 1

Input

```
4
1 2 3 4
```

Output

```
false
```

Explanation

There is no 132 pattern in the sequence.

Example 2

Input

```
4
3 1 4 2
```

Output

```
true
```

Explanation

There is a 132 pattern in the sequence: [1, 4, 2]

Example 3

Input

```
4
-1 3 2 0
```

Output

```
true
```

Explanation

There are three 132 patterns in the sequence: [-1, 3, 2], [-1, 3, 0] and [-1, 2, 0].

Constraints

1 <= n <= 2*10^5

-10^9 <= nums[i] <= 10^9

Topic Tags

- Stacks
- Arrays

My code

```
// n java
import java.util.*;

//

class Solution {
    public boolean find132pattern(int[] arr) {
                int n=arr.length;
         List<Integer> small = new ArrayList<>();
        int min1 = arr[0];
        for (int i = 0; i < n; i++) {
            if (min1 >= arr[i]) {
                min1 = arr[i];
                small.add(-1);
            }
            else {
                small.add(min1);
                 }
        }
        Stack<Integer> s = new Stack<>();
        for (int i = n - 1; i > 0; i--) {
            while (!s.isEmpty()
                    && s.peek() <= small.get(i)) {
                s.pop();
```

```
            }
            if (!s.isEmpty() && small.get(i) != -1
                && s.peek() < arr[i]) {
                return true;
            }
            s.push(arr[i]);
        }
        return false;
    }
}

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n;
        n = sc.nextInt();
        int arr[] = new int[n];
        for (int i = 0; i < n; i++)
            arr[i] = sc.nextInt();
        Solution Obj = new Solution();
        boolean result = Obj.find132pattern(arr);
        if (result)
            System.out.println("true");
        else
            System.out.println("false");
        sc.close();
    }
}
```