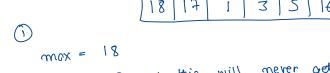


Introduction to Arrays (Introduction to Problem Solving I)

Additional Problems

Q5. Se	econd Largest	Д
0	Using hints except Complete Solution is Penalty free now	Use Hint
	em Description re given an integer array A. You have to find the secon	d largest
	nt/value in the array or report that no such element	
Probl	em Constraints	
	A <= 10 ⁵ A [i] <= 10 ⁹	
-	Format	
The	first argument is an integer array A .	
Outpu	ut Format	
	rn the second largest element. If no such element exi rn -1.	ist then
Exam	ple Input	
Inpu	t 1:	
Α	= [2, 1, 2]	
Inpu	t 2:	
Α	= [2]	

Input 1:	
A = [2, 1, 2]	
Input 2:	
A = [2]	
example Output	
Output 1:	
1	
Output 2:	
-1	
Example Explanation Explanation 1: First largest element = 2 Second largest element = 1 Explanation 2: There is no second largest element in the	
array.	
(1)) 16
mox = 18	
10 - this will mever	get



Second Max = 18

this way we have the but second max = previous stored

: we also need on else-if condition else if (ele > secondMox) { second Max = ele =) but what if the array only are element 18 - i) el = 18 Initial mox = - ~ smax = - 0 mox = 18 2 Max = -5 =) so for that we can have a check before the algoritm even storts if (A.length == 1) return - 2; // Algorithm Skeletan if (A.length == 1) & return -2; int max = Integer. MINIMUM_ VALUE; both one lowest passible integers int second Max = mox;

```
for ( int i = 0; i < A.length; i++) (
     if CACID> max) &
                                         NOT COPPECTION
         second Max = max;
                                          Tsee below for
         max = Aci];
                                                   correction
      ] else if (A[i] > second Mox) (
                   Second Max = Ali);
                                           if max = second Max
 return mox > second Max? second Mox: -1
                 wait !!!
             but what if
                 [] = xoM2
               S = xoM2
     SMOX = -0
                          5 Mox = 18
                          NOILI
we need to modify else it
       else if ( A[i] > second Max & M A[i] < max)
```

SUBMISSION WAS NOT SELECTED

Mry ? Observation

In the problem constraints it is mentioned

Problem Constraints

 $1 \le |\mathbf{A}| \le 10^5$

 $0 \le A[i] \le 10^9$

elements of the orray will always be gleater than 'O'

~ 20 j

→ you don't need to set mox, second Mox as Integer. MIN - VALUE

you can just set it as -1

why?

- We have to actum the second largest element

→ If it doesn't exist, we cryways have to seturn -2

→ So, if the algorithm was unable to set any element as the second Maximum, anyways just returning second Maximum would be fire

```
if (A.length == 1)
    return -1;
int max = -1;
int Second Mox = -1;
for ( int i = 0; i < A. length; it+) &
     if ( ACi] > mox) {
         Second Max = max;
        mox = ACi];
    Jelse if (A[i] > second Mox 49 A[i] < mox) &
                  Second Mox = ACi];
                              Accepted
geturn second Mox;
```

// Skeleton Chope it's right this time)