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Started on	Tuesday, 27 August 2024, 2:19 PM
State	Finished
Completed on	Tuesday, 8 October 2024, 2:25 PM
Time taken	42 days
Marks	1.00/1.00
Grade	4.00 out of 4.00 (100%)

Question 1

Correct

Mark 1.00 out of 1.00

Find Duplicate in Array.

Given a read only array of n integers between 1 and n , find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5 1 1 2 3 4	1

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6     int arr[n];
7
8     for (int i = 0; i < n; i++) {
9         scanf("%d", &arr[i]);
10    }
11
12    int printed[n];
13    int printedIndex = 0;
14
15    for (int i = 0; i < n; i++) {
16        int count = 0;
17
18        for (int j = 0; j < n; j++) {
19            if (arr[i] == arr[j]) {
20                count++;
21            }
22        }
23
24        if (count > 1) {
25            int alreadyPrinted = 0;
26            for (int k = 0; k < printedIndex; k++) {
27                if (arr[i] == printed[k]) {
28                    alreadyPrinted = 1;
29                    break;
30                }
31            }
32            if (!alreadyPrinted) {
33                printf("%d\n", arr[i]);
34                printed[printedIndex++] = arr[i];
35            }
36        }
37    }
38
39    return 0;
40 }
41
```

	Input	Expected	Got	
✓	11 10 9 7 6 5 1 2 3 8 4 7	7	7	✓
✓	5 1 2 3 4 4	4	4	✓
✓	5 1 1 2 3 4	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ 4-DP-Longest non-decreasing Subsequence

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2-Finding Duplicates- $O(n)$ Time Complexity, $O(1)$ Space Complexity ▶