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Started on	Tuesday, 27 August 2024, 2:53 PM
State	Finished
Completed on	Tuesday, 1 October 2024, 12:12 PM
Time taken	34 days 21 hours
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 find_duplicate(int arr[], int n) {
4      int i, j;
5
6      for (i = 0; i < n; i++) {
7          for (j = i + 1; j < n; j++) {
8              if (arr[i] == arr[j]) {
9                  return arr[i];
10             }
11         }
12     }
13
14     return -1; // No duplicate found
15 }
16
17 int main() {
18     int n, i;
19
20
21     scanf("%d", &n);
22
23     int arr[n];
24
25
26     for (i = 0; i < n; i++) {
27         scanf("%d", &arr[i]);
28     }
29
30     int duplicate = find_duplicate(arr, n);
31
32     if (duplicate != -1) {
33         printf("%d", duplicate);
34     }
35
36
37
38     return 0;
39 }
40

```

	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.

◀ 1-Finding Duplicates-O(n^2) Time Complexity,O(1) Space Complexity

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