CS23331-DAA-2024-CSE / 2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity

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

Started on	Thursday, 20 November 2025, 9:52 PM
State	Finished
Completed on	Thursday, 20 November 2025, 9:53 PM
Time taken	1 min 8 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 | Correct   Mark 1.00 out of 1.00   🏳 Flag question

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 1 2 3 4
```

Answer: (penalty regime: 0 %)

```c
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 freq[n + 1];
13     for (int i = 0; i <= n; i++) {
14         freq[i] = 0;
15     }
16
17     for (int i = 0; i < n; i++) {
18         if (freq[arr[i]] == 1) {
19             printf("%d\n", arr[i]);
20             return 0;
21         }
22         freq[arr[i]] = 1;
23     }
24
25
26     printf("No duplicate found\n");
27     return 0;
28 }
```

	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! ✔

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