

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	Friday, 10 October 2025, 2:12 PM
State	Finished
Completed on	Friday, 24 October 2025, 2:15 PM
Time taken	14 days
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 2 3 4	1







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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 slow = arr[0];
13    int fast = arr[0];
14
15    do {
16        slow = arr[slow];
17        fast = arr[arr[fast]];
18    } while (slow != fast);
19
20    slow = arr[0];
21    while (slow != fast) {
22        slow = arr[slow];
23        fast = arr[fast];
24    }
25
26    printf("%d\n", slow);
27    return 0;
28 }
29

```

	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.

