



JAYARAMAN S 2024-CSE ▾

J2

Started on Monday, 3 November 2025, 3:27 AM**State** Finished**Completed on** Monday, 3 November 2025, 3:28 AM**Time taken** 53 secs**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     int slow = arr[0];
12     int fast = arr[0];
13
14     // Phase 1: Find the intersection point in the cycle
15     do {
16         slow = arr[slow];
17         fast = arr[arr[fast]];
18     } while (slow != fast);
19
20     // Phase 2: Find the entry point of the cycle (duplicate number)
21     fast = arr[0];
22     while (slow != fast) {
23         slow = arr[slow];
24         fast = arr[fast];
25     }
26
27     printf("%d\n", slow);
28     return 0;
29 }
30

```

	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.

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