



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 1 2 3 4	

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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