



Dashboard > Algorithms > Bit Manipulation > Lonely Integer

Badge Progress (Details)



Points: 1101 Rank: 33325

You have successfully solved Lonely Integer

[Try the Next Challenge](#) | [Try a Random Challenge](#)

Lonely Integer

by dheeraj

Problem

Submissions

Leaderboard

Discussions

Editorial

Topics

You will be given an array of integers. All of the integers except one occur twice. That one is unique in the array.

Given an array of integers, find and print the unique element.

Input Format

The first line contains a single integer, n , denoting the number of integers in the array.

The second line contains n space-separated integers describing the respective values in a .

Constraints

- $1 \leq n < 100$
- It is guaranteed that n is an odd number and that there is one unique element.
- $0 \leq a_i \leq 100$, where $0 \leq i < n$.

Output Format

Print the unique integer in the array.

Sample Input 0

```
1
1
```

Sample Output 0

```
1
```

Explanation 0

There is only one element in the array, thus it is unique.

Sample Input 1

```
3
1 1 2
```

Sample Output 1

```
2
```

Explanation 1

We have two 1's, and 2 is unique.

Sample Input 2

```
5
0 0 1 2 1
```

Sample Output 2

```
2
```

Explanation 2

We have two **0**'s, two **1**'s, and one **2**. **2** is unique.

Easy

Submitted 96359 times
Max Score 20**Need Help?**[View Discussions](#)[View Editorial Solution](#)[View Top Submissions](#)**Rate This Challenge:****Resources**[Bitwise XOR](#)[Caching](#)[Download problem statement](#)[Download sample test cases](#)[Suggest Edits](#)

Current Buffer (saved locally, editable)

C++14



```
1 #include <vector>
2 #include <iterator>
3 #include <iostream>
4 #include <algorithm>
5 #include <numeric>
6 using namespace std;
7
8 inline int Find(vector<int> &a)
9 {
10     return accumulate(a.begin(), a.end(), 0, [](int &k, int &i){ return k = k ^ i;});
11 }
12
13 int main()
14 {
15     int n; cin>>n;
16
17     vector<int> vec;
18     vec.reserve(n);
19     copy_n(istream_iterator<int>(cin), n, back_inserter(vec));
20 }
```

```
21     cout<<Find(vec)<<endl;
22
23     return 0;
24 }
25
```

Line: 12 Col: 1

 [Upload Code as File](#)☐ Test against custom input

Run Code

Submit Code

Congrats, you solved this challenge!

Challenge your friends: [f](#) [t](#) [in](#)

✓ Test Case #0

✓ Test Case #3

✓ Test Case #6

✓ Test Case #1

✓ Test Case #4

✓ Test Case #7

✓ Test Case #2

✓ Test Case #5

✓ Test Case #8

Next Challenge

[Contest Calendar](#)[Blog](#)[Scoring](#)[Environment](#)[FAQ](#)[About Us](#)[Support](#)[Careers](#)[Terms Of Service](#)[Privacy Policy](#)[Request a Feature](#)