AND xor OR

by bokamvinaykumar

Problem | Submissions | Leaderboard | Discussions | Editorial

Given an array $A[]$ of N distinct elements. Let M_1 and M_2 be the smallest and the next smallest element in the interval $[L, R]$ where $1 \leq L < R \leq N$.

$S_i = (((M_1 \wedge M_2) \oplus (M_1 \vee M_2)) \wedge (M_1 \oplus M_2))$.

where $\wedge, \vee, \oplus$, are the bitwise operators AND, OR and XOR respectively.
Your task is to find the maximum possible value of S_i.

Input Format

First line contains integer N.
Second line contains N integers, representing elements of the array $A[]$.

Constraints
$1 < N \leq 10^6$
$1 \leq A_i \leq 10^9$

Output Format

Print the value of maximum possible value of S_i.

Sample Input

```
5
9 6 3 5 2
```

Sample Output

```
15
```

Explanation

Consider the interval $[1, 2]$ the result will be maximum.
$(((9 \wedge 6) \oplus (9 \vee 6)) \wedge (9 \oplus 6)) = 15$

Submissions:3458

Max Score:70
Difficulty: Hard

Rate This Challenge:

More

Current Buffer (saved locally, editable)

C++

```
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}

```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code