JOBS

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Maximum XOR Subset

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Given an array of size at most 18, write a program that prints the maximum XOR (Bitwise Exclusive-Or) of any non-empty subset of the array.

XOR of two numbers A and B is done by A^B.

Non-empty subset means a set that has atleast one element and all its elements are present in the original array.

Input Format

First line contains a number N, size of the array. Next N lines contain one integer each.

Constraints

1 <= N <= 18 1 <= A[i] <= 1000

Output Format

Output One number, the maximum possible XOR among the XORs of all subsets.

Sample Input 0

1 1

Sample Output 0

1

Sample Input 1

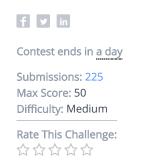
3 2 4 1

Sample Output 1

7

Explanation 1

Maximum Xor is obtained when the subset is $\{1,2,4\}$ as $1^2^4 - 7$. A higher value isnt possible.



More

```
20 | 4
  Current Buffer (saved locally, editable) \ \mathscr{V} \ \mathfrak{O}
                                                                                          C++14
   1 ▼#include <cmath>
   2 #include <cstdio>
   3 #include <vector>
   4 #include <iostream>
   5 #include <algorithm>
   6 using namespace std;
   8
  9 vint main() {
10 v /* Enter
           /\star Enter your code here. Read input from STDIN. Print output to STDOUT \star/
  11
           return 0;
  12 }
  13
                                                                                                                     Line: 1 Col: 1
<u> 1 Upload Code as File</u> ☐ Test against custom input
                                                                                                     Run Code
```

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