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DAY HRS MIN SEC

September Circuits '17

LIVE

Sep 22, 2017, 09:00 PM IST - Oct 02, 2017, 09:00 PM IST

INSTRUCTIONS PROBLEMS SUBMISSIONS LEADERBOARD ANALYTICS JUDGE

← Problems / Coin Game

Coin Game

Max. Marks: 100

Charlie and Alan have challenged each other to a game of logic with coins.

The game consists of ${\bf N}$ piles of coins with each pile consisting of A_i coins. The game progresses as follows: in each turn a player selects any of the piles with even number of coins and removes exactly the half the coins out of that pile. The game ends when a player can't make a move. The last move is a winning move.

Charlie makes the first move. Assuming both players play optimally, predict who wins the game.

Input

The first line consists of the number of test cases T ($1 \le T \le 100$).

Each test case consists of two lines.

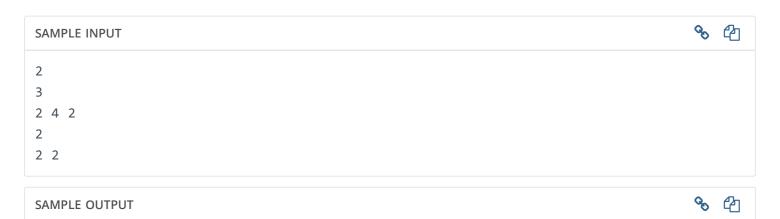
The first line in each test case contains the single integer N ($1 \le N \le 1000$) — the number of piles of coins.

The second line contains N space separated integers A_i ($1 \le A_i \le 10^9$), specifying number of coins in piles.

Output

Output T lines.

For each case, output "Charlie" (without quotes) if Charlie wins the game, and "Alan" (without quotes) if Alan wins the game.



Alan Alan

Explanation

First case: Following are moves by players in their turns:

- 1) Charlie selects the first pile. After that number of coins in piles are: 1 4 2
- 2) Alan selects the third pile. After that number of coins in piles are: 1 4 1
- 3) Charlie selects the second pile. After that number of coins in piles are: 1 2 1
- 4) Alan selects the second pile. After that number of coins in piles are: 1 1 1

No further moves possible. Alan wins

Time Limit: 1.0 sec(s) for each input file.

Memory Limit: 512 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes.

Allowed Languages: C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js),

Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript),

Racket, Ruby, Rust, Scala, Swift, Visual Basic

CODE EDITOR

Enter your code or Upload your code as file.

Save

C (gcc 5.4.0)





```
#include <stdio.h>
 1
 2
 3
    int main()
 4
 5
        int t,n;
 6
        long a;
 7
        scanf("%d",&t);
 8
        while(t--){
 9
             scanf("%d",&n);
10
             long sum=0;
             for(int i=0; i<n;i++){</pre>
11
                  scanf("%ld",&a);
12
                 while( a%2==0 ){
13
                      sum++;
14
15
                      a/=2;
16
                 }
17
18
             if(sum&1)
                           printf("Charlie\n");
                           printf("Alan\n");
19
             else
20
21
        return 0;
22
    }
23
```



" Tip: You can submit any number of times you want. Your best submission is considered for computing total score.

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