



04 : 02 : 17 : 12  
DAY HRS MIN SEC

# September Circuits '17

LIVE

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

10

LIVE EVENTS

INSTRUCTIONS

PROBLEMS

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LEADERBOARD

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## Coin Game

Max. Marks: 100

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

The game consists of  $N$  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  $T$  ( $1 \leq T \leq 100$ ).

Each test case consists of two lines.

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

The second line contains  $N$  space separated integers  $A_i$  ( $1 \leq A_i \leq 10^9$ ), 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.

#### SAMPLE INPUT



```
2
3
2 4 2
2
2 2
```

#### SAMPLE OUTPUT



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.

SaveC (gcc 5.4.0)



```
1 #include <stdio.h>
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;
11        for(int i=0; i<n;i++){
12            scanf("%ld",&a);
13            while( a%2==0 ){
14                sum++;
15                a/=2;
16            }
17        }
18        if(sum&1)    printf("Charlie\n");
19        else        printf("Alan\n");
20    }
21    return 0;
22 }
23
```

1:1

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

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