**Coin Game**

Attempted by: **4570**

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Accuracy: **81%**

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Maximum Score: **20**

/

37 Votes

Tag(s):

Ad-Hoc, Easy, Implementation

**PROBLEM**

**EDITORIAL**

**MY SUBMISSIONS**

**ANALYTICS**

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 Ai 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<=T<=100).

Each test case consists of two lines.

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

The second line contains *N* space separated integers Ai (1≤Ai≤109), 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 when all the testcases pass.

**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, Swift-4.1, Visual Basic

#include <iostream>

using namespace std;

int main()

{

long t;

cin>>t;

while(t--)

{

long n;

cin>>n;

long a[n];

for(long i=0;i<n;i++)

cin>>a[i];

long count=0;

for(long i=0;i<n;i++)

{

while(a[i]%2==0)

{

count++;

a[i]=a[i]/2;

}

}

if(count%2==0)

cout<<"Alan"<<endl;

else

cout<<"Charlie"<<endl;

}

}