

# Programmers and Stones

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

Programmers Alice and Dmitry invented a new game. In this game, there are  $n$  piles of stones on the table. The players take turns starting from Alice. On their turn, a player can pick an arbitrary non-empty set of non-empty piles, and then remove one stone from each of them. The player who can't make a move loses. Who will win the game if both play optimally?

## Input

The first line contains an integer  $n$  ( $1 \leq n \leq 100\,000$ ).

The second line contains  $n$  numbers  $a_1, a_2, \dots, a_n$ : the initial sizes of the piles of stones ( $1 \leq a_i \leq 10^9$ ).

## Output

Print “Alice” or “Dmitry”, depending on who wins the game. In the names, letter case **does** matter.

## Examples

<i>standard input</i>	<i>standard output</i>
5 1 2 3 4 5	Alice
2 2 2	Dmitry