1020 – A Childhood Game

Alice and Bob are playing a game with marbles; you may have played this game in childhood. The game is playing by alternating turns. In each turn a player can take exactly one or two marbles.

Both Alice and Bob know the number of marbles initially. Now the game can be started by any one. But the winning condition depends on the player who starts it. If Alice starts first, then the player who takes the last marble looses the game. If Bob starts first, then the player who takes the last marble wins the game.

Now you are given the initial number of marbles and the name of the player who starts first. Then you have to find the winner of the game if both of them play optimally.

Input

Input starts with an integer **T (≤ 10000)**, denoting the number of test cases.

Each case contains an integer **n ($1 \leq n < 2^{31}$)** and the name of the player who starts first.

Output

For each case, print the case number and the name of the winning player.

Sample Input	Output for Sample Input
3 1 Alice 2 Alice 3 Bob	Case 1: Bob Case 2: Alice Case 3: Alice