EKMEK

Kayra and Asya are siblings. Before breakfast, their mother realized there is no bread at the home. She wanted Asya and Kayra to go to the market and buy bread. The siblings are determined by playing their own game to decide who is going to buy bread.

They play N games between them. The game is played in turns. Each game consists of B chapters. Each player is allowed to pass maximum M chapters during his / her own turn.
A player will lose if he/she plays the last chapter. Loser of the games will go to buy bread.
Let's find who would go to the market.

The two siblings play the game optimally.

Input Format:

Number of games N at the first row.
Next N line, the number of chapters B, the maximum number of chapters that can be passed M and the player who will start the game K(Kayra) or A(Asya).

Output Format:

The name of the sibling who is going to the market and the number of games which won by the loser. The sibling goes to the market, Asya or Kayra.

Constrains:

$1 <= N,B <= 10^6$
$1 <= M <= B$

Sample Input1:

2
3 2 K
5 1 A

Sample Output1:

Asya 0

Explanation1:

1.Game
Chapters -> 1 2 3
Who played->K K A
Asya lost the first game

2.Game
Chapters -> 1 2 3 4 5
Who played->A K A K A
Asya lost the second game

Asya:0 Kayra:2. Asya went to market to buy bread.