5   M&M Wars

It's the day after Halloween and you and your friend both have a couple of packets of M&Ms. You both decide to play M&M wars, a game where each player takes an M&M and squishes them together. The weaker M&M will crumble, while the one that survives makes it to the next round. You and your friend have so much fun squishing M&Ms that you decide to write a computer program that mimics this amusing sensation.

For the program, 2 players will each have a pile of M&Ms. Both players take the M&M that is at the top of their pile, and crushes it against their opponent's top M&M. Each M&M has a strength value, and whoever has the higher strength M&M wins. The M&M that gets crushed gets tossed away (or eaten), and the winning M&M is left with a strength of its strength minus the defeated M&M's strength.

If both M&Ms have the same strength, then both M&Ms crush and both get tossed away. When a player's M&M is crushed, they take the next M&M that is at the top of their pile. The game continues until 1 or both players no longer have any M&Ms left. The loser is the first player to run out of M&Ms.

5.1   Input

2 lines of comma-separated strings in the following format:

color strength, color strength, ..., color strength

Each M&M is comma separated, and *color* is the color of the M&M and *strength* is a positive integer. The 1st line represents player 1's M&Ms, and the 2nd line represents player 2's M&Ms. The bottom of the pile is the left most M&M, while the top of the pile is the right most M&M.

5.2   Output

The output will be the player that won, along with the M&M color and strength that was last in battle. The output should be in the following format:

player color strength

Where *player* is either "P1" or "P2", denoting the winning player (player 1 or player 2, respectively) and *color* and *strength* denotes the color and strength of the M&M that defeated the opponent's last M&M. In the case of a tie, simply output "tie".
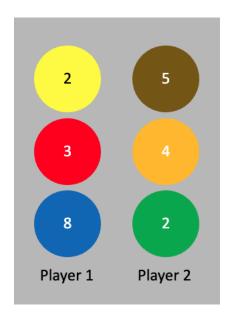
5.3   Sample Input/Output

Sample Input 1	Sample Output 1
Blue 8, Red 3, Yellow 2	P1 Blue 2
Green 2, Orange 4, Brown 5	
Sample Input 2	Sample Output 2
Orange 8, Brown 7, Orange 7	tie
Blue 12, Red 5, Green 5	
Sample Input 3	Sample Output 3
Blue 2, Yellow 1	P2 Red 4
Orange 9, Red 7	

5.4 Explanation

Let's say that we were given the following input:

Blue 8, Red 3, Yellow 2
Green 2, Orange 4, Brown 5

We can draw the following picture to represent these piles of M&Ms:

Using the rules mentioned above:

1. Player 2's brown M&M crushes player 1's yellow M&M ($5 > 2$). Player 2's brown M&M is left with a strength of $5 - 2 = 3$, and player 1's yellow M&M is thrown away.

2. Player 1's red M&M and player 2's brown M&M both have a strength of 3, so both M&Ms crush and get thrown away.

3. Player 1's blue M&M crushes player 2's orange M&M ($8 > 4$). Player 1's blue M&M is left with a strength of $8 - 4 = 4$, and player 2's orange M&M is thrown away

4. Player 1's blue M&M crushes player 2's green M&M ($4 > 2$). Player 1's blue M&M is left with a strength of $4 - 2 = 2$, and player 2's green M&M is thrown away

5. Player 1 wins since player 2 does not have any M&Ms, so the output would be *P1 Blue 2*