PROBLEM 1

Consider the following card game to be played by Players A and B. Each player is given n cards. A number between 0 and 9 is printed on the right side of each card. Before starting a game, each player lays their n cards wrong side up on their own line, a line for each player. A game consists of n turns. In the first turn, both A and B pick the leftmost card up on their own line. If the number printed on the card picked up by a player, say A, is larger than B's, then A wins to gain the two cards (i.e., A's card as well as B's). If the numbers printed on the two cards are the same, then both A and B gain their own card. Thus at the end of the first turn, there remain $n - 1$ cards on each player's line of cards. The second turn will be played similarly for the remaining cards. Repeating the turns n times, no cards remain on each line of the players, and the game is over.

   The score of a player is the sum of numbers printed on the cards gained by the player.

   Your task is to write a program that simulates a game, that is, it reads and lays n cards for each player, executes a game with the cards, and outputs the score of each player, where $0 < n \leq 10000$.

INPUT

The first line of each input file contains an integer n, the number of cards given to each player. The $i + 1$-st line $(i = 1, 2, \cdots, n)$ contains 2 integers separated by a single space character: the first one is the number printed on the i-th card (counting from left to right on the line) of A, and the second one is the number printed on the i-th card of B.

OUTPUT

Your program should output a line which contains the scores of A and B in this order, respectively, separated by a single space character. The line should end with the Return code.

EXAMPLE

Example input 1	Example input 2	Example input 3
3	3	3
9 1	9 1	9 1
5 4	5 4	5 5
0 8	1 0	1 8

Example output 1	Example output 2	Example output 3
19 8	20 0	15 14