

B. Tournament

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

The tournament «Sleepyhead-2010» in the rapid falling asleep has just finished in Berland. n best participants from the country have participated in it. The tournament consists of games, each of them is a match between two participants. $n \cdot (n - 1) / 2$ games were played during the tournament, and each participant had a match with each other participant.

The rules of the game are quite simple — the participant who falls asleep first wins. The secretary made a record of each game in the form « $x_i y_i$ », where x_i and y_i are the numbers of participants. The first number in each pair is a winner (i.e. x_i is a winner and y_i is a loser). There is no draws.

Recently researches from the «Institute Of Sleep» have found that every person is characterized by a value p_j — the speed of falling asleep. The person who has lower speed wins. Every person has its own value p_j , constant during the life.

It is known that all participants of the tournament have distinct speeds of falling asleep. Also it was found that the secretary made records about all the games except one. You are to find the result of the missing game.

Input

The first line contains one integer n ($3 \leq n \leq 50$) — the number of participants. The following $n \cdot (n - 1) / 2 - 1$ lines contain the results of the games. Each game is described in a single line by two integers x_i, y_i ($1 \leq x_i, y_i \leq n, x_i \neq y_i$), where x_i и y_i are the numbers of the opponents in this game. It is known that during the tournament each of the n participants played $n - 1$ games, one game with each other participant.

Output

Output two integers x and y — the missing record. If there are several solutions, output any of them.

Examples

input	Copy
<pre>4 4 2 4 1 2 3 2 1 3 1</pre>	
output	Copy
<pre>4 3</pre>	