

## Universities (30 min., 20 points)

There are  $N$  ( $N \leq 50$ ) universities at science-education computer network. The universities are linked by fiber-optic communication channels. Any two universities are connected by no more than one communication channel. All channels are full-duplex, i.e. information can be transmitted in both directions.

The university is a network fragment coordinator, if it can transmit a block of information through one communication channel and receive the same block through the other one.

The task is to develop a program to find the universities, which are the network fragment coordinators.

### Input File

The first line of the input file *input.txt* contains a positive integer  $N$ . Each of the following lines contains two separated with a space positive integers  $I$  and  $J$ , denoting the presence of communication channel linking universities  $I$  and  $J$ .

### Output File

The output file *output.txt* contains a single line with the numbers of university-coordinators separated with a space character. The numbers must be sorted in ascending order.

The last line must not be completed with a new line symbol (new line symbol is 0D0Ah).

### Example

<i>input.txt</i>	<i>output.txt</i>
5 1 2 2 3 3 4 1 3 5 4	1 2 3