

Problem C. Get a tree

Time limit 1000 ms
Mem limit 131072 kB

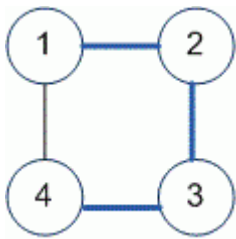
The connected undirected graph without loops and multiple edges is given. You are allowed to remove the edges from it. Obtain a tree from the graph.

Input data

The first line contains the number of vertices n ($1 \leq n \leq 100$) and the number of edges m of the graph. The next m pairs of numbers define the edges. It is guaranteed that the graph is connected.

Output data

Print $n - 1$ pairs of numbers — the edges that will be included in a tree. The edges can be displayed in any order.



Examples

Input	Output
4 4 1 2 2 3 3 4 4 1	1 2 2 3 3 4