Articulation Points and Bridges

https://www.hackerearth.com/practice/algorithms/graphs/articulation-points-and-bridges/tutorial/

Given an undirected graph containing **N** vertices and **M** edges, find all the articulation points and all the bridges in the graph.

Input:
First line consists of two space separated integers denoting **N** and **M**. **M** lines follow, each containing two space separated integers **X** and **Y** denoting there is an edge between **X** and **Y**.

Output:
If the number of articulation points in the graph is **p** and that of bridges is **q** , then print as shown below:
p
p space separated integers, the articulation points, sorted in increasing order
q
q lines, each containing two space separated integers, the bridges in the graph. For a bridge **u-v**, print **u** first if **u < v**, otherwise print **v** first. Print all the bridges in increasing order of first vertex, and if first vertex is same, then in increasing order of second vertex.

Constraints:
1 ≤ **N, M** ≤ 10
0 ≤ **X, Y** ≤ N-1

Example:

Input	Output
3 2 0 1 1 2	1 1 2 0 1 1 2