

Euro Truck Simulator

Input file: *standard input*
Output file: *standard output*
Time limit: 12 seconds
Memory limit: 2048 MB

Welcome to Europe!

You are responsible for planning a network of warehouses for a large logistics company. There are N cities connected by M bidirectional roads.

You want to build warehouses in some of the cities. A city can receive supplies from a warehouse if there is a way to travel from that warehouse to the city using the available roads.

The network should remain reliable even if **one road is suddenly closed** due to an accident, construction, or some other unexpected event.

Therefore, your warehouses must be placed so that, no matter which single road is closed, **every city can still be reached from at least one warehouse**.

Your task is to determine the minimum number of warehouses needed and the cities where they should be built.

If there are several ways to use the minimum number of warehouses, choose the one that is lexicographically smallest. The city numbers in the answer should be given in increasing order.

Input

The first line contains two integers N ($1 < N < 10^6$) and M ($N - 1 \leq M \leq 10^7$)— the number of cities and roads.

The following M lines contain two distinct integers u and v ($1 \leq u, v \leq N$), meaning that cities u and v are connected by a bidirectional road.

It is guaranteed that the entire network is connected.

Output

On the first line, output a single integer W — the minimum number of warehouses required.

On the second line, output W distinct integers representing the cities where the warehouses should be built, in increasing order.

If multiple optimal solutions exist, output the lexicographically smallest one.

Example

standard input	standard output
6 7 1 2 2 3 1 3 3 4 4 5 4 6 5 6	2 1 4