

# Few to cover

Let  $G$  be a graph with a set of  $n$  nodes and a set of  $m$  edges. A vertex cover set  $VC$  is a subset of nodes, such that all edges in  $G$  have at least one of their end points in  $VC$ .

A minimal vertex cover set is a vertex cover set such that removing any vertex from the set will make at least one edge in  $G$  left uncovered.

In this task, you are given a undirected graph as the input, and you have to find as small as possible vertex cover set within the time limit. Your score is the total number of vertex cover nodes found in all test cases.

## Input

The first line contains two integers,  $n$  and  $m$ , representing the numbers of nodes and edges in the graph.  $3 \leq n \leq 2000$  and  $3 \leq m \leq 40000$ . The nodes are numbered  $1..n$ , but not necessarily in any order. The next  $m$  lines contain pair of integers representing edges between two nodes. The list of edges are not in any particular order.

## Output

There should be one line output listing all valid minimal set vertex cover nodes you found in the graph. The nodes are separated by one space.

## Example

### Input:

```
6 7
1 2
1 5
2 3
2 5
3 4
3 6
5 6
```

### Output:

```
2 3 5
```