Problem E
Eulerian Path

Input

The input consists of several test cases. Each test case starts with a line with two non-negative integers, $2 \le n \le 10\,000$ and $1 \le m \le 50\,000$, separated by a single space, where n is the numbers of nodes in the graph and m is the number of edges. Nodes are numbered from 0 to $n-1$. Then follow m lines, each line consisting of two (space-separated) integers u and v indicating that there is an edge from u to v in the graph.

Input will be terminated by a line containing `0 0`, this line should *not* be processed.

Output

For each test case, output a line consisting of a space-separated list of the nodes visited by an Eulerian path if one exists (if there are multiple Eulerian paths, any one is acceptable, so for the second case below, `1 0 1` is also a valid solution), or the word `Impossible` if no Eulerian path exists.

Sample Input 1

```
4 4
0 1
1 2
1 3
2 3
2 2
0 1
1 0
2 1
0 1
0 0
```

Sample Output 1

```
Impossible
0 1 0
0 1
```