Detect cycle in directed Graph

Detect and print the cycle in ascending order. If there are multiple cycles, print the cycle with nodes' sum smallest.

Input Format

Given number of nodes and edges, N,M Next line contains edges u and v (u->v edge) space separated, 2*M values

Constraints

1 < N < 10

1 < M < 50

Output Format

single line node values in sorted order

Sample Input 0

```
5 5
1 2 2 4 4 5 5 3 3 2
```

Sample Output 0

```
2 3 4 5
```

Sample Input 1

```
5 5
2 4 2 3 4 3 1 5 5 1
```

Sample Output 1

```
1 5
```