

# Connection

*Time limit: 1 sec*

There is an advice to a university student saying that “it’s not the grades you make, but the hands you shake.” It is very important to know other students especially when we all will someday working in related fields. There are some students who are better in making connection with people than other student. We wish to identify such student.

Knowing People can be represented by an undirected graph. For a group of **N** student (numbered 0 to **N**-1), we model a graph such that the vertices (numbered 0 to **N**-1) represents the students. There is an edge connecting two vertices if the corresponding student know each other. For each student, we say every student that she know is a degree 1 friends. Every student that degree 1 friends know is call a degree 2 friend. Formally, we say that a degree **K** friends of student A is every student represented by a vertex that can be reached with a path of length at most **K** from vertex A.

Your task is to identify the student who has maximum number of degree **K** friends.

## Input

- The first line of input contains three integers **N**, **E** and **K** ( $1 \leq \mathbf{N} \leq 1,000$ ;  $1 \leq \mathbf{E} \leq 100,000$ ;  $1 \leq \mathbf{K} \leq 4$ ) which are the number of vertices and edges in the graph and the degree of friends.
- The next **E** lines give edges, one edge per line. Each line contains two integers A and B which indicates that student A and B mutually know each other. It is guaranteed that  $A < B$  and there is no repetitive line.

## Output

The only line of output must contain the maximum number of degree **K** friend of the most connected student. We consider a student to be the degree 0 friend of oneself.

## Example

Input	Output
7 8 2 0 6 1 6 1 5 1 4 2 3 3 4 4 5 5 6	6