

Problem D. Determinant

Input file: *standard input*
Output file: *standard output*
Time limit: 5 seconds
Memory limit: 256 mebibytes

Um_nik has a simple connected undirected graph with the following property:

For any subset A of $k + 1$ vertices of the graph, there exist two vertices $a, b \in A$ and some edge e , such that all paths from a to b contain edge e .

Please help him find the determinant of the adjacency matrix of his graph modulo 998 244 353.

Input

The first line contains three integers n, m, k : the number of vertices and edges in the graph and the given parameter ($1 \leq n \leq 25\,000$, $n - 1 \leq m \leq 500\,000$, $1 \leq k \leq 25$).

The next m lines describe edges of the graph. Each of them contains two integers u and v : the two vertices connected by an edge ($1 \leq u, v \leq n$, $u \neq v$).

It is guaranteed that this graph is connected and also for any subset A of $k + 1$ vertices of the graph, there exist two vertices $a, b \in A$ and an edge e such that all paths from a to b contain edge e . It is guaranteed that this graph doesn't contain multiple edges.

Output

Print a single integer: the determinant of Um_nik graph's adjacency matrix modulo 998 244 353.

Examples

standard input	standard output
4 3 1 1 2 2 3 3 4	1
6 6 3 2 3 5 6 2 5 1 2 3 4 6 2	998244352
10 15 10 1 8 1 7 6 7 2 8 6 9 1 2 4 9 4 10 4 6 5 6 3 8 9 10 8 10 3 5 2 7	35

Note

