Criminal Clique

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

The Cyber Criminals are hiding from the Programming Police in a building with N rooms, labeled 1 through N, where some pairs of rooms are connected by a hallway. The Cyber Criminals want to fit as many people into the building as possible such that any two criminals are in adjacent rooms to facilitate communication. There are K distinct hallways of the form $[A_i, B_i]$ such that A_i and B_i are valid room numbers that are not the same. Find the maximum number of criminals, M, that the Cyber Criminals can fit into the building.

Input

Line 1: N and K separated by spaces
Line 2...K+1: On line $i + 1$, A_i and B_i separated by spaces

Output

Line 1: Maximum M

Example

standard input	standard output
3 2 1 2 1 3	2

Note

$1 \leq N \leq 15$
$0 \leq K \leq N * (N - 1)/2$
$1 \leq A_i, B_i \leq N$