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The Virtual Learning Environment for Computer Programming

Squares in a graph
Onzè Concurs de Programació de la UPC - Semifinal (2013-06-19)
You are given an undirected graph $G$. Let us define a square as any cycle of length exactly four in $G$. Can you count the number of squares in $G$ ?

## Input

Input consists of several cases. Every case begins with two natural numbers $n$ and $m$, which are respectively the number of vertices and the number of edges of $G$. Follow $m$ pairs $x y$ to indicate that there is an edge connecting vertices $x$ and $y$. Assume $0 \leq n \leq 2000$ and $0 \leq m \leq 10 n$. Vertices are numbered starting at 0 . There are no edges of the kind $x x$, nor repeated edges.

## Output

For every given $G$, print its number of squares.

| Sample input |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
| 4 | 4 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 0 | 1 | 1 | 2 | 2 | 3 | 3 | 0

## Problem information

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Generation : 2013-09-02 15:46:29
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