

C. Close to Gray^{[1][2]}

Problem ID: complement

You are given a simple undirected graph G with n vertices and m black edges. The i -th black edge connects vertices u_i and v_i . For every pair of distinct vertices not connected by a black edge, there is a white edge between them.

We call two distinct vertices x and y *close to gray* if both of the following conditions hold:

- It is possible to travel from x to y using only black edges.
- It is possible to travel from x to y using only white edges.

Find the number of unordered pairs (x, y) , where $1 \leq x < y \leq n$, that are *close to gray*.

Input

The first line contains two integers n and m , representing the number of vertices and black edges, respectively.

Each of the next m lines contains two integers u_i and v_i , indicating that there is a black edge between them.

- $2 \leq n \leq 5 \times 10^5$
- $0 \leq m \leq 5 \times 10^5$
- $1 \leq u_i, v_i \leq n$
- $u_i \neq v_i$
- There are no multiple edges between the same pair of vertices.

Output

Output a single integer representing the number of unordered pairs that are *close to gray*.

Sample Input 1	Sample Output 1
4 4 1 3 2 3 1 4 2 4	2

Sample Input 2	Sample Output 2
6 11 1 2 1 3 1 5 2 3 2 4 2 6 3 4 3 5 3 6 4 5 5 6	4

Sample Input 3	Sample Output 3
252525 0	0