Problem E. Chemistry

Input file:	`standard input`
Output file:	`standard output`
Time limit:	5 seconds
Memory limit:	1024 megabytes

Changki Yun is a professor in the Department of Chemistry, Seoul National University. To fight the ongoing COVID-19 pandemic, Changki conducts research on a certain molecule.

The molecule consists of N atoms with M chemical bonds, which we will simply consider as an undirected graph without self-loops or parallel edges. Note that, unlike real-life chemistry, it is not guaranteed that the molecule is connected, or that atoms in the molecule have degree at most 4.

Changki can use a machine to change the molecule. When Changki enters two integers $1 \le L \le R \le N$, the machine will keep only atoms in the range $L, L+1, \cdots, R$, as well as any bonds that were only between kept atoms.

Changki thinks that molecules which form **chains** are crucial to his research. A molecule forms a chain if you can place the atoms in a line such that a chemical bond between two atoms exists if and only if they are adjacent on the line. Please count the number of pairs (L, R) which can be put in the machine to form a chain.

Input

The first line contains two space-separated integers N, M ($1 \le N \le 250\,000, 0 \le M \le 250\,000$).

The next M lines contain two space-separated integers u, v denoting that there is a chemical bond connecting vertices u and v. ($1 \le u, v \le N, u \ne v$) There are no parallel edges.

Output

Print the single integer denoting the answer.

Examples

<table>
<tr><th>standard input</th><th>standard output</th></tr>
<tr><td><pre>3 3
1 2
2 3
3 1</pre></td><td><pre>5</pre></td></tr>
<tr><td><pre>8 7
2 1
1 4
4 3
3 8
8 7
7 5
5 6</pre></td><td><pre>17</pre></td></tr>
<tr><td><pre>12 12
1 2
3 4
5 6
7 8
9 10
11 12
2 4
4 6
6 8
8 10
10 12
12 2</pre></td><td><pre>28</pre></td></tr>
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