1615. Maximal Network Rank

Medium 638 124 Add to List Share

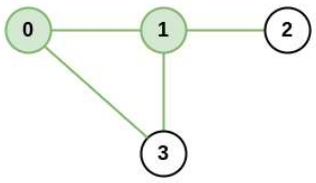
There is an infrastructure of `n` cities with some number of `roads` connecting these cities. Each `roads[i] = [a_i, b_i]` indicates that there is a bidirectional road between cities `a_i` and `b_i`.

The **network rank** of **two different cities** is defined as the total number of **directly** connected roads to **either** city. If a road is directly connected to both cities, it is only counted **once**.

The **maximal network rank** of the infrastructure is the **maximum network rank** of all pairs of different cities.

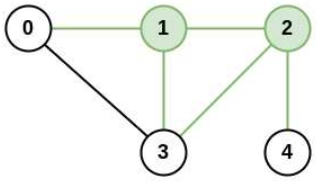
Given the integer `n` and the array `roads`, return *the **maximal network rank** of the entire infrastructure.*

Example 1:




```
Input: n = 4, roads = [[0,1],[0,3],[1,2],[1,3]]
Output: 4
Explanation: The network rank of cities 0 and 1 is 4 as there are 4 roads that are
connected to either 0 or 1. The road between 0 and 1 is only counted once.
```

Example 2:




```
Input: n = 5, roads = [[0,1],[0,3],[1,2],[1,3],[2,3],[2,4]]
Output: 5
Explanation: There are 5 roads that are connected to cities 1 or 2.
```

Example 3:

```
Input: n = 8, roads = [[0,1],[1,2],[2,3],[2,4],[5,6],[5,7]]
Output: 5
Explanation: The network rank of 2 and 5 is 5. Notice that all the cities do not
have to be connected.
```

Constraints:

- `2 <= n <= 100`
- `0 <= roads.length <= n * (n - 1) / 2`
- `roads[i].length == 2`
- `0 <= a_i, b_i <= n-1`
- `a_i != b_i`
- Each pair of cities has **at most one** road connecting them.

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Java Autocomplete

```java
class Solution {
    public int maximalNetworkRank(int n, int[][] roads) {

    }
}
```