

Maximal Network Rank

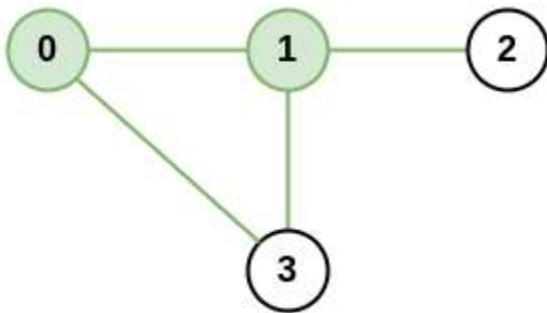
There is an infrastructure of n cities with some number of roads connecting these cities. Each $\text{roads}[i] = [a_i, b_i]$ indicates that there is a bidirectional road between cities a_i and b_i .

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:

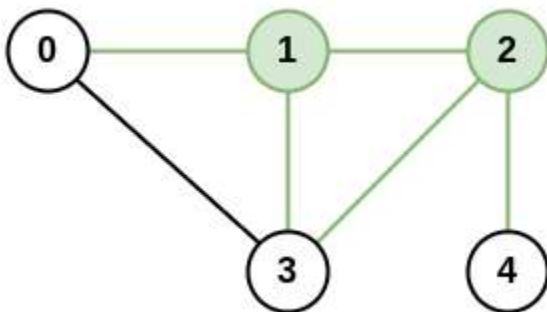


Input: $n = 4$, `roads = [[0,1],[0,3],[1,2],[1,3]]`

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:

- $2 \leq n \leq 100$
- $0 \leq \text{roads.length} \leq n * (n - 1) / 2$
- $\text{roads}[i].\text{length} == 2$
- $0 \leq a_i, b_i \leq n-1$
- $a_i \neq b_i$
- Each pair of cities has **at most one** road connecting them.