# **Problem 2 – Protoss**

The Protoss, a.k.a. the Firstborn, are a sapient humanoid race native to Aiur. Their advanced technology complements and enhances their psionic mastery.

The Zealot is a type of Protoss warrior. All Protoss have a degree of psionic power, and Zealots use theirs exclusively for battle. Zealots have a limited form of precognition; they may predict enemy movements, strike with deadly accuracy, and dodge attacks.

On the battlefield, Zealots are connected to each other by their psionic power. The closer they are, the stronger is their connection. You will be given the battlefield map and the connections between every two Zealots. Your task is to find the most connected warrior among all of them.

**Zealot A** is considered **hyper-connected** to another **Zealot B**, if **A** and **B** are **connected** to each other **directly** or there is a third **Zealot C**, who is **directly connected** to both **A** and **B**. The strongest warrior is the one with the most hyper-connections on the battlefield. There may be more than one such warrior, but it does not matter for your task. The connections are always bidirectional.

You are given the total number of Zealots and all connections between them (as ‘Y’ or ‘N’ in the input). If on the **X** **row** the **Z** **symbol** is ‘Y’, then **Zealot X** and **Zealot Z** are connected. Your task is to find the number of hyper-connections of the strongest warrior on the battlefield.

#### Input

* The input data should be read from the console.
* On the first line there will be the integer number **C** – the total number of Zealots on the battlefield.
* On each of the next **C** lines, you will receive exactly **C** symbols, containing `Y` or `N`.
* The input data will always be valid and in the format described. There is no need to check it explicitly.

#### Output

* The output should be printed on the console.
* Output the number of hyper-connections of the strongest warrior on the battlefield.

#### Constraints

* **C** will be a non-negative integer between 1 and 50, inclusive.
* A Zealot will never be connected to himself.
* Allowed working time for your program: **0.1 seconds**. Allowed memory: **16 MB**.

#### Examples

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | | **Output** | **Comment** |
| 3  NNN  NNN  NNN | | 0 | We have three Zealots and no connections between them. There are no hyper-connections. |
| **Input** | **Output** | | **Comment** |
| 3  NYY  YNY  YYN | 2 | | We have three Zealots and each one of the is connected to the other two. This means each one of them has exactly 2 hyper-connections. |
| **Input** | | **Output** | **Comment** |
| 5  NYNNN  YNYNN  NYNYN  NNYNY  NNNYN | | 4 | The first and the last Zealots have 2 hyper-connections. The second and the fourth have 3 hyper-connections. The third one has the most hyper-connections – 4. |