# Problem 10 – Tennis

You are given a group of **players** who wish to play tennis. Two players can only play together if they **like each other**. We are given **all pairs of players who like each other** want to play together. Each player can play with at most one other player. Find the **distribution of players into couples**, which maximizes the number of **games**.

## Input

* The input is read from the console.
* On the first line there is the word “**People:**” followed by all player names, each on a separate line.
* At the next line there is the word “**Connections:**” followed by all player connections. A connection between two people means that they can play against one another. The connections are given in format “**Player1** - **Player2**” each on a separate line.
* At the last line of the input the word “**END**” will come, which indicates the end of the input.

## Output

* Print the **number of couples** in the maximal distribution.

## Constraints

* The player **names** contain only Latin letters (case-sensitive) and digits.
* The number of **players** is in the range [1…500].
* The number of **connections** is in the range [1…10000].
* Time limit: **200 ms**. Allowed memory: **16 MB**.

## Sample Input and Output

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Explanations** |
| People:  Pesho  Maria  Ivan  Gosho  Connections:  Pesho - Gosho  Maria - Ivan  Ivan - Gosho  Pesho - Maria  Maria - Gosho  END | 2 | There are two maximal distributions and each of them holds 2 couples of players: |

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Explanations** |
| People:  Pesho  Maria  Ivan  Gosho  Penka  Kiril  Doncho  Asen  Connections:  Pesho - Maria  Maria - Ivan  Ivan - Gosho  Gosho - Penka  Penka - Pesho  Gosho - Kiril  Kiril - Doncho  Doncho - Asen  END | 4 | Sample distribution of players that have the maximal number of couples – 4: |

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Explanations** |
| People:  Go  VB  PHP  JavaScript  CSharp  Ruby  Java  SQL  Python  Basic  Connections:  Go - PHP  PHP - VB  PHP - JavaScript  CSharp - Ruby  Java - Ruby  Java - Python  SQL - Basic  Ruby - SQL  Basic - Python  END | 4 | Sample distribution of players that have the maximal number of couples – 4: |