A job placement service at your university handles summer stages of students in commercial companies. This year, there is a set of students requesting a job, and several companies offering exactly one job. After evaluating all the curricula, the job placement service has a list of the companies that are willing to hire each student. The director of this service wishes to know the maximum number of jobs that can be filled.

Input

Input consists of several cases. Every case begins with the number of students $n$, followed by $n$ lines with the offers for each student, with exactly the format shown in the sample input. Some students can receive offers from every company, but the average number of offers per student is “small”. All student names and company names are different alphanumeric strings. Overall, there are at most $n$ company names. Assume $1 \leq n \leq 1000$.

Output

For each case, print the maximum number of jobs that can be filled.

Sample input

6
Austin : Adobe Apple10 HP
Bob : Adobe Apple10 Yahoo
Carol : HP IBM Sun
Dave : Adobe Apple10
Eliza : IBM Sun Yahoo
Frank : HP Sun Yahoo
10
A : Z X
H : P S T
I : N Z X
B : Z X
J :
E : Y
C : Z Q R S K
D : Z S
F : P S
G : Z N

Sample output

6
8

Problem information

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