Problem M. Miser

Input file:	standard input
Output file:	standard output
Time limit:	2 seconds
Memory limit:	512 megabytes

In some non-classical University, there is going to be an opening ceremony of the cafeteria in n days. In front of the closed cafeteria, there is a sign with a number — how many days are left before the opening.

For each day out of these n, the director of the cafeteria knows all the people who are coming to the University and are going to see the sign. The director has to choose a sign with a number each day, such that each person who is coming to the University sees that the number on the sign is decreasing. The director is a typical *miser* who spends as little money as possible and wants to order the minimum possible number of different signs. Your task is to help the director find this number.

Consider the first test case: person 1 comes on days 1, 2 and 5, and person 2 comes on days 2, 3 and 4. The director can order just four signs with numbers 1, 2, 3 and 4, to put a sign with 1 on days 5 and 4, a sign with 2 on day 3, a sign with 3 on day 2, and a sign with 4 on day 1. Thus, person 1 will see the signs 4, 3, and 1 and person 2 will see the signs 3, 2, and 1.

Input

The first line of the input contains an integer n — the total number of days before the opening of the cafeteria. The next n lines contain the description of each day. The description starts with the positive integer k — the number of people that come to the University this day. This integer is followed by k distinct integers — the identifiers of the people that come.

The sum of all k over all days does not exceed 10^5. Identifiers of people are positive and do not exceed 10^5.

Output

Output one integer — the minimum possible number of different signs that have to be ordered.

Examples

standard input	standard output
5 1 1 2 1 2 1 2 1 2 1 1	4
5 1 1 1 1 1 1 1 1 1 1	5