

B. Berland Bingo

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Lately, a national version of a bingo game has become very popular in Berland. There are n players playing the game, each player has a card with numbers. The numbers on each card are distinct, but distinct cards can have equal numbers. The card of the i -th player contains m_i numbers.

During the game the host takes numbered balls one by one from a bag. He reads the number aloud in a high and clear voice and then puts the ball away. All participants cross out the number if it occurs on their cards. The person who crosses out all numbers from his card first, wins. If multiple people cross out all numbers from their cards at the same time, there are no winners in the game. At the beginning of the game the bag contains 100 balls numbered 1 through 100, the numbers of all balls are distinct.

You are given the cards for each player. Write a program that determines whether a player can win the game at the most favorable for him scenario or not.

Input

The first line of the input contains integer n ($1 \leq n \leq 100$) — the number of the players. Then follow n lines, each line describes a player's card. The line that describes a card starts from integer m_i ($1 \leq m_i \leq 100$) that shows how many numbers the i -th player's card has. Then follows a sequence of integers $a_{i,1}, a_{i,2}, \dots, a_{i,m_i}$ ($1 \leq a_{i,k} \leq 100$) — the numbers on the i -th player's card. The numbers in the lines are separated by single spaces.

It is guaranteed that all the numbers on each card are distinct.

Output

Print n lines, the i -th line must contain word "YES" (without the quotes), if the i -th player can win, and "NO" (without the quotes) otherwise.

Examples

input
3 1 1 3 2 4 1 2 10 11
output
YES NO YES

input
2 1 1 1 1
output
NO NO