

2044 Courses

Consider a group of N students and P courses. Each student visits zero, one or more than one courses. Your task is to determine whether it is possible to form a committee of exactly P students that satisfies simultaneously the conditions:

- every student in the committee represents a different course (a student can represent a course if he/she visits that course)
- each course has a representative in the committee

Input

Your program should read sets of data from a text file. The first line of the input file contains the number of the data sets. Each data set is presented in the following format:

```
 $P$   $N$ 
 $Count_1$   $Student_{1\ 1}$   $Student_{1\ 2}$  .....  $Student_{1\ Count_1}$ 
 $Count_2$   $Student_{2\ 1}$   $Student_{2\ 2}$  .....  $Student_{2\ Count_2}$ 
...
 $Count_P$   $Student_{P\ 1}$   $Student_{P\ 2}$  .....  $Student_{P\ Count_P}$ 
```

The first line in each data set contains two positive integers separated by one blank: P ($1 \leq P \leq 100$) — the number of courses and N ($1 \leq N \leq 300$) — the number of students. The next P lines describe in sequence of the courses — from course 1 to course P , each line describing a course. The description of course i is a line that starts with an integer $Count_i$ ($0 \leq Count_i \leq N$) representing the number of students visiting *course* i . Next, after a blank, you'll find the $Count_i$ students, visiting the course, each two consecutive separated by one blank. Students are numbered with the positive integers from 1 to N .

There are no blank lines between consecutive sets of data. Input data are correct.

Output

The result of the program is on the standard output. For each input data set the program prints on a single line 'YES' if it is possible to form a committee and 'NO' otherwise. There should not be any leading blanks at the start of the line.

Sample Input

```
2
3 3
3 1 2 3
2 1 2
1 1
3 3
2 1 3
2 1 3
1 1
```

Sample Output

YES

NO