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Algorithmen und Wahrscheinlichkeit
Programming Exercise

Exercise 1 – *Surprise food!*

A friend wants to open an online food company called 'Surprise food!'. The idea is that clients do not decide for a single dish, but instead select a list of all dishes they like from the menu. Then the company delivers *one* dish out of the list. However, planning is not one of your friends top skills and he has just prepared some meals without actually checking the request list. That is, he has prepared d_i meals of the i-th dish, hoping that this will be enough.

The grand opening is in two hours and your friend wants to know if *it is possible to distribute the prepared meals in such a way that every client gets a meal from her list.* The goal is to decide whether such a distribution of meals is possible.

Input The first line of the input file contains an integer $1 \leq t \leq 30$ denoting the number of test cases that follow. Each of the t test cases is described as follows.

- It starts with a line consisting of two integers `n m`, separated by a space, denoting the number of different dishes in the menu ($1 \leq n \leq 100$) and the number of clients ($1 \leq m \leq 100$).
- The next line contains n integers $\texttt{d}_0 \ \ldots \ \texttt{d}_{n-1}$, separated by a space, and such that $0 \leq d_i \leq 10^3$. Each d_i denotes the number of prepared meals of dish i.
- The following m lines define the lists of dishes of the m clients. The ℓ-th line describes the list of the ℓ-th client. It starts with an integer `k` which specifies the length of this list, followed by k different integers $\texttt{f}_0 \ \ldots \ \texttt{f}_{k-1}$, separated by a space, and such that $0 \leq f_j < n$, for all $j \in \{0, \ldots, k-1\}$. Each f_j denotes a dish on the list of this client.

Output For each test case output one line containing '`yes`' if it is possible to distribute the meals such that every client gets a meal from her list and '`no`' otherwise. You can serve at most d_i meals from the i-th dish.

Points This exercise is worth 100 points.

Sample Input

```
5
1 1
10
0
1 1
0
1 0
1 1
1
1 0
2 2
2 0
2 0 1
1 0
2 2
0 2
2 0 1
1 0
```

Sample Output

```
no
no
yes
yes
no
```