

2269 WEB Reservation Application

The travel agency where you work, asked you to modify the Web Reservation Application Page to include the following functionality

FUNCTIONALITY

Given a departing city C and an airline A , determine all the cities that can be reached from C using only airline A .

The number of airlines is n ($1 \leq n \leq 25$) and are identified as 0 to $n - 1$. The number of cities is m ($2 \leq m \leq 100$) and the cities are identified as 0 to $m - 1$.

Input

The input file contains several test.

The first line of each test contains two positive integers: the number of existing cities (m) and the number of existing airlines (n).

The next lines contain several positive integers. Each line contains the departing city number, an airline number and the city numbers for all the cities that you can get to from the departing city using single flights by the given airline.

The last line of the test contains only two positive integers: the number of a departing city and the number of the airline that you want use.

There is a blank line between tests. The input ends when $m = 0$ and $n = 0$.

Output

The output of your program will be a single line of positive ordered integers for each test. Based on the information of the last line in the test, the output line contains the city number of all the cities that you can reach from the departing city, using only the given airline. Do not include in the output the departing city number.

When you can't get to any city from the departing city using the given airline, the output line should contain the next message: 'There are no possible destinations through this airline'.

Sample Input

```
17 3
1 1 2
1 0 6
1 2 5
2 1 3
2 0 7
2 2 6
3 1 4
3 0 8
3 2 7
4 2 8
5 1 6
5 0 10
5 2 9
```

```
6 1 7
6 0 11
6 2 10
7 1 8
7 0 12
7 2 11
8 2 12
9 1 10
9 0 14
9 2 13
10 1 11
10 0 15
10 2 14
11 1 12
11 0 16
11 2 15
12 2 16
13 1 14
14 1 15
15 1 16
1 0
100 100
1 0
```

Sample Output

```
6 11 16
No hay destinos posibles por esta línea
```