Maximum Weight Node

You are given a maze with N cells. Each cell may have multiple entry points but not more than one exit (ie, entry/exit points are unidirectional doors like valves).

The cells are named with an integer value from 0 to N-1.

You have to find:

Find the node number of maximum weight node (Weight of a node is the sum of node numbers of all nodes pointing to that node)

INPUT FORMAT

1. An integer T, denoting the number of testcases, followed by 2T lines, as each testcase will contain 2 lines.

2. The first line of each testcase has the number of cells N.

3. The second line of each testcase has a list of N values of the edge[] array. edge[i] contains the cell number that can be reached from of cell 'i' in one step. edge[i] is -1 if the 'i'th cell doesn't have an exit.

OUTPUT FORMAT

First line denotes the node number with maximum wight node.

Sample Input

1

23

4, 4, 1, 4, 13, 8, 8, 8, 0, 8, 14, 9, 15, 11, -1, 10, 15, 22, 22, 22, 22, 22, 21

Sample Output

22

Function Description

N/A

Magic Words:

Given a sorted dictionary of another universe language having N words and k starting alphabets of a standard dictionary. Find the order of characters in the universe language. Many orders may be possible for a particular testcase, thus you may return any valid order.

**Example:**

**Input:** N = 5, K = 4

dict = {"baa","abcd","abca","cab","cad"}

**Output**: b d a c

**Explanation:**

We will analyze every consecutive pair to find out the order of the characters.

The pair “baa” and “abcd” suggests ‘b’ appears before ‘a’ in the alien dictionary.

The pair “abcd” and “abca” suggests ‘d’ appears before ‘a’ in the alien dictionary.

The pair “abca” and “cab” suggests ‘a’ appears before ‘c’ in the alien dictionary.

The pair “cab” and “cad” suggests ‘b’ appears before ‘d’ in the alien dictionary.

So, [‘b’, ‘d’, ‘a’, ‘c’] is a valid ordering.

**Example 2:**

**Input:** N = 3, K = 3

dict = {"caa","aaa","aab"}

**Output**: c a b

**Explanation:** Similarly, if we analyze the consecutive pair

for this example, we will figure out [‘c’, ‘a’, ‘b’] is

a valid ordering.

Escape from the Matrix:

A game contains a maze represented as a graph with n vertices numbered 1 to n and m bidirectional edges numbered 1 to m. The i-th edge connects endpoint[i][1] and endpoint[i][2]. It takes edgeLength[i] units of time to traverse the i-th edge. Each vertex i will disappear at time t[i] and will not reappear. If a visit occurs at the time t[i] and the vertex disappears, the vertex cannot be reached.

The game starts at vertex 1 and time 0. Find the earliest visit time for each vertex, starting from vertex 1. If a vertex cannot be reached, the arrival time is ∞.

T[] size n=3

T=[10,3,7]

Endpoint1[] size m=3

Endpoint1=[1,1,2]

Endpoint2[] size m=3

Endpoint2=[2,3,3]

Edgelength[] size m=3

Edgelength [3,9,1]

OUTPUT:

0

-1

-1