Binary Search Tree

문제 정보

문제 ID	시간 제한	메모리 제한	제출 횟수	정답 횟수 (비율)
BST	5000ms	65536kb	826	214 (25%)
출제자	출처		분류	
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문제

In computer science, a **binary search tree** (BST) is a binary tree data structure which has the following properties:

> Each node in the tree has a unique numeric key.
> The left subtree of a node X only contains nodes with keys less than X's key.
> The right subtree of a node X only contains nodes with keys greater than X's key.
> Both the left and right subtrees must also be binary search trees.

This problem is very simple. Given a binary tree, figure out whether it is a binary search tree or not.

입력

The first line of the input contains one integer T, the number of test cases.

Each test case describes a binary tree with N (1 <= N <= 100) nodes, indexed by integers 1 to N. The first line of each test case contains N.
Then N line follow, each containing three integers L_i, R_i, K_i (1 <= i <= N).

> L_i denotes the index of the left child of node i. If the node doesn't have a left child, L_i = 0.
> R_i denotes the index of the right child of node i. If the node doesn't have a right child, R_i = 0.
> K_i denotes the key of the node i. 0 <= K_i <= 1000.

You can safely assume that the input forms a valid binary tree.

출력

For each test case, print "YES" in one line if the given binary tree is a binary search tree. If not, print "NO" instead.

예제 입력

```
2
5
3 2 4
0 0 5
4 5 2
0 0 1
0 0 3
4
0 0 2
4 3 3
1 0 3
0 0 1
```

예제 출력

```
YES
NO
```

노트

7개의 댓글이 있습니다.