Full Binary Tree

Problem | Submissions | Leaderboard | Discussions

A full binary tree is defined as a binary tree in which all nodes have either zero or two child nodes. Given the elements of the tree from left to right and level by level, your mission is to build the tree and check whether the tree is full or not ("YES" or "NO").

Input Format

The first line contains N, the number of elements in the tree. Each of the next lines contains an integer represents an element in the level traversal.

Input nodes may have zero, one or two children. If the number is -1, then the node is null.

Constraints

- 1 <= N, nums[i] <= 10^4

Output Format

Print "YES" or "NO".

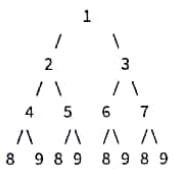
Sample Input 0

```
15
1
2
3
4
5
6
7
8
9
8
9
8
9
8
9
```

Sample Output 0

```
YES
```

Explanation 0



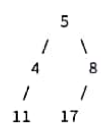
Sample Input 1

```
7
5
4
8
11
-1
17
-1
```

Sample Output 1

```
NO
```

Explanation 1



Most Frequent Item in BST

Problem | Submissions | Leaderboard | Discussions

Given a binary search tree with duplicates, print the most frequent element in the BST. If there is more than one, print them in ascending order. The elements of the tree are given from left to right and level by level.

Input Format

The first line contains N, the number of elements in the list. Each of the next lines contains an integer represents an element in the traversal.

Input nodes may have zero, one or two children. If the number is -1, then the node is null.

Constraints

- 1 <= N, nums[i] <= 10^4

Output Format

Print the most frequent items one per line (sorted acendingly).

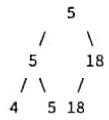
Sample Input 0

```
7
5
5
18
4
5
18
-1
```

Sample Output 0

```
5
```

Explanation 0



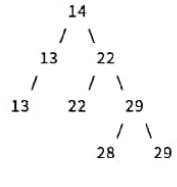
Sample Input 1

```
13
14
13
22
13
-1
22
29
-1
-1
-1
-1
28
29
```

Sample Output 1

```
13
22
29
```

Explanation 1



Balanced Binary Search Tree

Problem | Submissions | Leaderboard | Discussions

Given some numbers sorted in ascending order, build a balanced BST and print it in preorder traversal.

A balanced binary tree is a binary tree in which the height of the left and right subtree of any node differ by not more than 1.

Input Format

The first line of input contains an integer, N, the number of sorted elements.

Each of the next lines contains an integer represents an number.

Constraints

- The numbers are guaranteed to be sorted in ascending order.
- 0 < N <= 10^4
- -10^4 <= number <= 10^4

Output Format

Print the preorder traversal of the tree separated by comma.

Sample Input 0

```
7
1
2
3
4
5
6
7
```

Sample Output 0

```
4,2,1,3,6,5,7
```

Sample Input 1

```
3
1
1468
10000
```

Sample Output 1

```
1468,1,10000
```