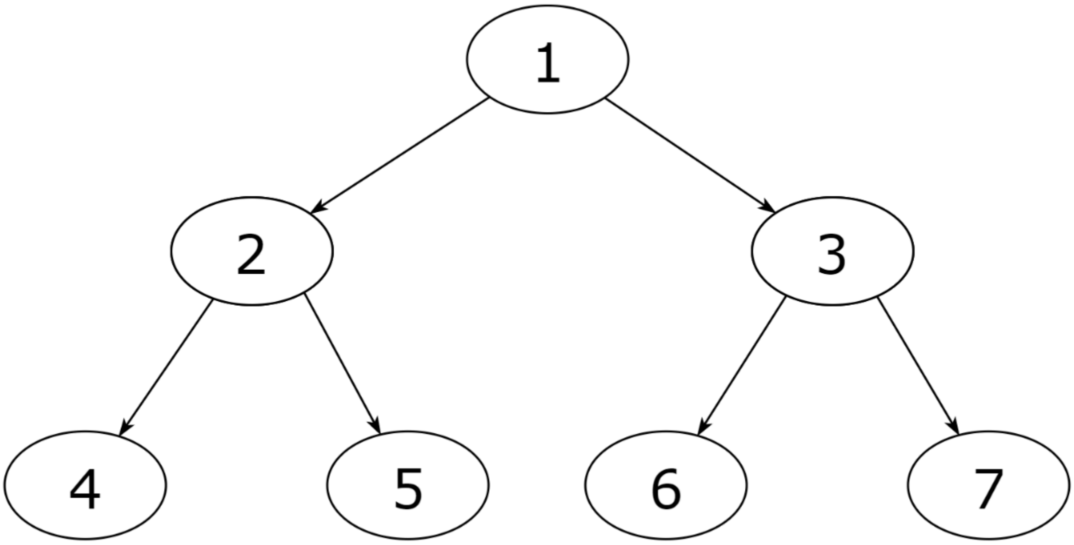
You are given the ‘POSTORDER’ and ‘PREORDER’ traversals of a binary tree. The binary tree consists of ‘N’ nodes where each node represents a distinct positive integer named from ‘1’ to ‘N’. The task is to return the root node of any binary tree that matches the given ‘POSTORDER’ and ‘PREORDER’ traversals.

Example:

‘POSTORDER’ = [4, 5, 2, 6, 7, 3, 1]

‘PREORDER’ = [1, 2, 4, 5, 3, 6, 7]

A binary tree that matches the given ‘POSTORDER’ and ‘PREORDER’ traversal is:



So, create this binary tree and return the root node ‘1’.

Note:

1. You can return any binary tree that matches the given ‘POSTORDER’ and ‘PREORDER’ traversals.

2. You can always construct a valid binary tree from the ‘POSTORDER’ and ‘PREORDER’ traversals.

Detailed explanation (Input/output format, Notes, Images)

Constraints:

1 <= T <= 10

1 <= N <= 10^3

Time limit: 1 second

Sample input 1:

2

6

6 2 4 5 3 1

1 4 2 6 3 5

5

1 5 3 2 4

4 1 2 3 5

Sample output 1:

6 2 4 5 3 1

1 4 2 6 3 5

1 5 3 2 4

4 1 2 3 5

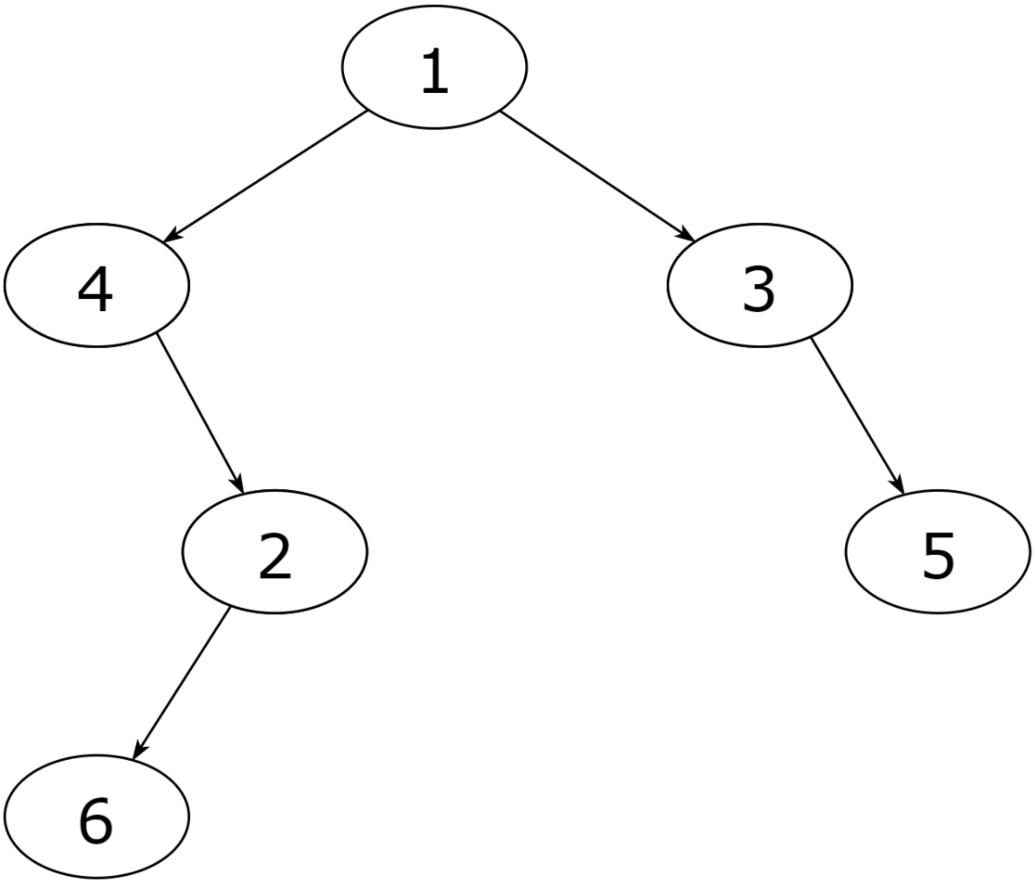
Explanation of sample input 1:

Test Case 1:

‘POSTORDER’ = [6, 2, 4, 5, 3, 1]

‘PREORDER’ = [1, 4, 2, 6, 3, 5]

A binary tree that matches the given ‘POSTORDER’ and ‘PREORDER’ traversal is:



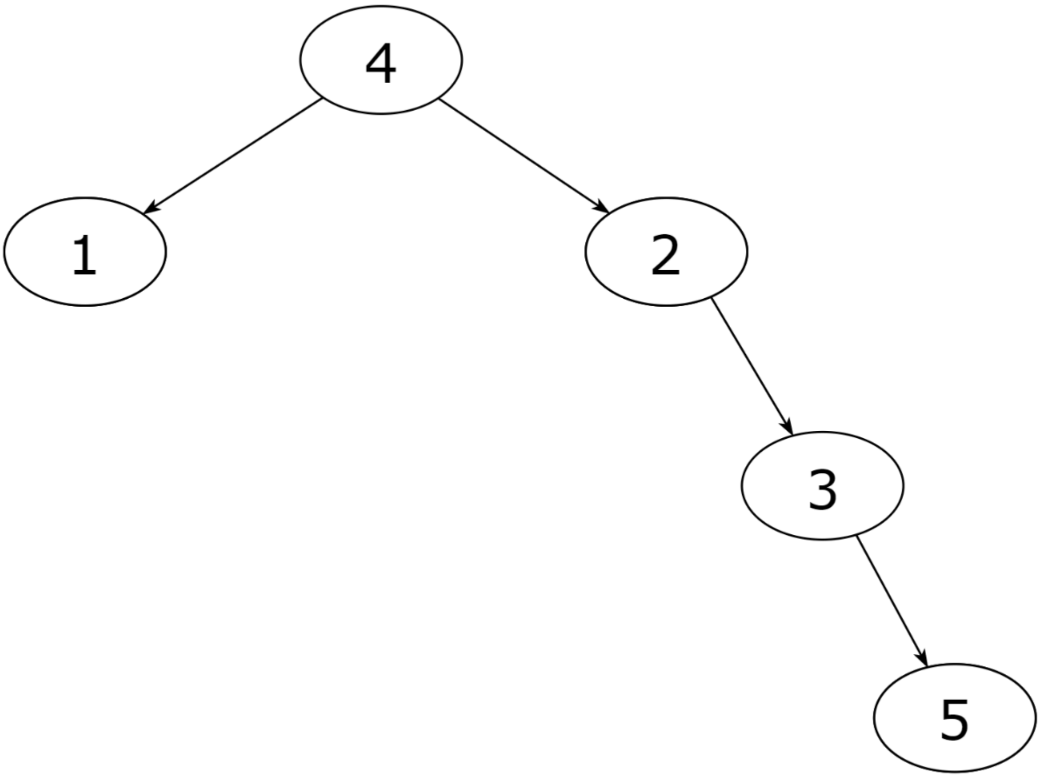
So, create this binary tree and return the root node ‘1’.

Test Case 2:

‘POSTORDER’ = [1, 5, 3, 2, 4]

‘PREORDER’ = [4, 1, 2, 3, 5]

A binary tree that matches the given ‘POSTORDER’ and ‘PREORDER’ traversal is:



So, create this binary tree and return the root node ‘4’.

Sample input 2:

2

4

3 4 1 2

2 1 3 4

5

5 4 3 2 1

1 2 3 4 5

Sample output 2:

3 4 1 2

2 1 3 4

5 4 3 2 1

1 2 3 4 5