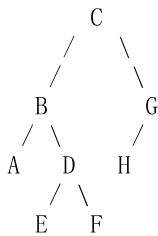# American Heritage

Farmer John takes the heritage of his cows very seriously. He is not, however, a truly fine bookkeeper. He keeps his cow genealogies as binary trees and, instead of writing them in graphic form, he records them in the more linear `tree in-order' and `tree pre-order' notations.

Your job is to create the `tree post-order' notation of a cow's heritage after being given the in-order and pre-order notations. Each cow name is encoded as a unique letter. (You may already know that you can frequently reconstruct a tree from any two of the ordered traversals.) Obviously, the trees will have no more than 26 nodes.

Here is a graphical representation of the tree used in the sample input and output:

```
            C
          /   \
         /     \
        B       G
       / \     /
      A   D   H
         / \
        E   F
```

The in-order traversal of this tree prints the left sub-tree, the root, and the right sub-tree.

The pre-order traversal of this tree prints the root, the left sub-tree, and the right sub-tree.

The post-order traversal of this tree print the left sub-tree, the right sub-tree, and the root.

PROGRAM NAME: heritage

INPUT FORMAT

Line 1:	The in-order representation of a tree.
Line 2:	The pre-order representation of that same tree.

SAMPLE INPUT (file heritage.in)

```
ABEDFCHG
CBADEFGH
```

OUTPUT FORMAT

A single line with the post-order representation of the tree.

SAMPLE OUTPUT (file heritage.out)

AEFDBHGC

Submission file Name: 选择文件 未选择文件   Send it in!