#include <stdio.h>

#include <string.h>

#include <math.h>

#include <stdlib.h>

struct node {

    int data;

    struct node \*left;

    struct node \*right;

};

struct node\* insert( struct node\* root, int data ) {

    if(root == NULL) {

        struct node\* node = (struct node\*)malloc(sizeof(struct node));

        node->data = data;

        node->left = NULL;

        node->right = NULL;

        return node;

    } else {

        struct node\* cur;

        if(data <= root->data) {

            cur = insert(root->left, data);

            root->left = cur;

        } else {

            cur = insert(root->right, data);

            root->right = cur;

        }

        return root;

    }

}

/\* you only have to complete the function given below.

node is defined as

struct node {

    int data;

    struct node \*left;

    struct node \*right;

};

\*/

struct node \*lca( struct node \*root, int v1, int v2 ) {

if(root==NULL) return NULL;

if(v1<root->data && v2 < root->data){

    return lca(root->left,v1,v2);

}

if(v1 > root->data && v2 > root->data){

    return lca(root->right,v1,v2);

}

return root;

}