图形用户界面, 应用程序

描述已自动生成

#include <bits/stdc++.h>

**using** **namespace** std;

**const** int SZ = 31;

int in[SZ], pre[SZ];

int n, cnt;

**struct** node {

int v;

node \*lch, \*rch;

node(int i): v(i), lch(**nullptr**), rch(**nullptr**) {}

};

*//t表示当前在前序的第t个node*

void buildTree(int l, int r, int &t, node\* &root) {

int id = -1;

**for**(unsigned i = l; i < r; ++i) {

**if** (in[i] == pre[t]) {

id = i;

**break**;

}

}

**if** (id == -1)

**return**;

root = **new** node(in[id]);

t++; *//前序往后一个*

**if** (id > l)

buildTree(l, id, t, root->lch); *//取到id-1个，id是从0开始数的*

**if** (id < r)

buildTree(id, r, t, root->rch);

}

*//将所有非叶结点的左右孩子对换*

void flipTree(node \*root) {

**if** (root == **nullptr**)

**return**;

**if** (root->lch == **nullptr** && root->rch == **nullptr**)

**return**;

node \*tmp = root->lch;

root->lch = root->rch;

root->rch = tmp;

flipTree(root->lch);

flipTree(root->rch);

}

void bfs(node \*root) {

queue<node\*> q;

q.push(root);

node \*current;

**while** (!q.empty()) {

current = q.front();

q.pop();

cout << current->v;

**if** (cnt++ != n-1)

cout << ' ';

**if** (current->lch)

q.push(current->lch);

**if** (current->rch)

q.push(current->rch);

}

}

int main() {

ios\_base::sync\_with\_stdio(false);

cin.tie(NULL);

cin >> n;

**for**(unsigned i = 0; i < n; ++i) {

cin >> in[i];

}

**for**(unsigned i = 0; i < n; ++i) {

cin >> pre[i];

}

node \*root;

int t = 0;

buildTree(0, n, t, root);

flipTree(root);

bfs(root);

**return** 0;

}