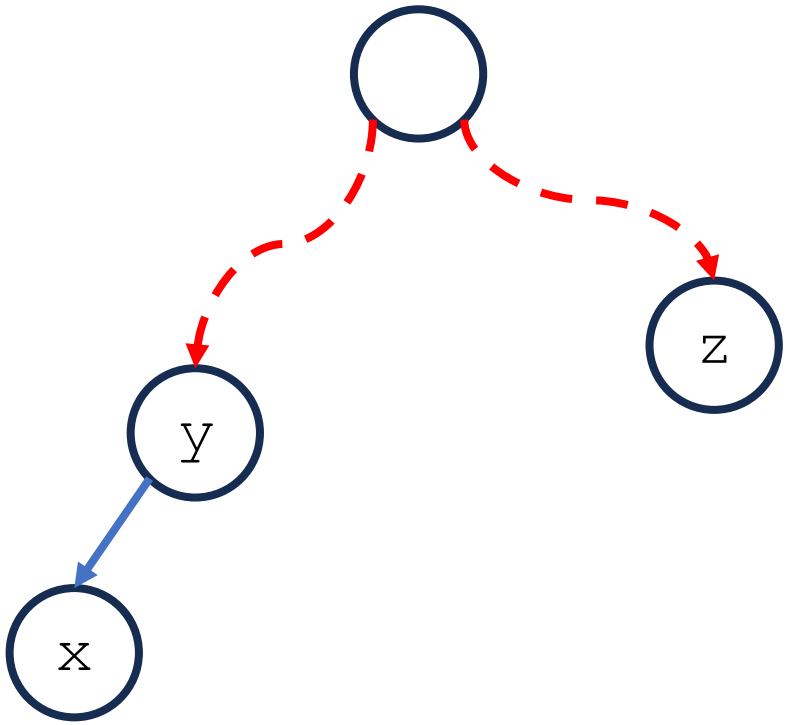
第十讲：树的颜色-HZOJ-257

胡船长

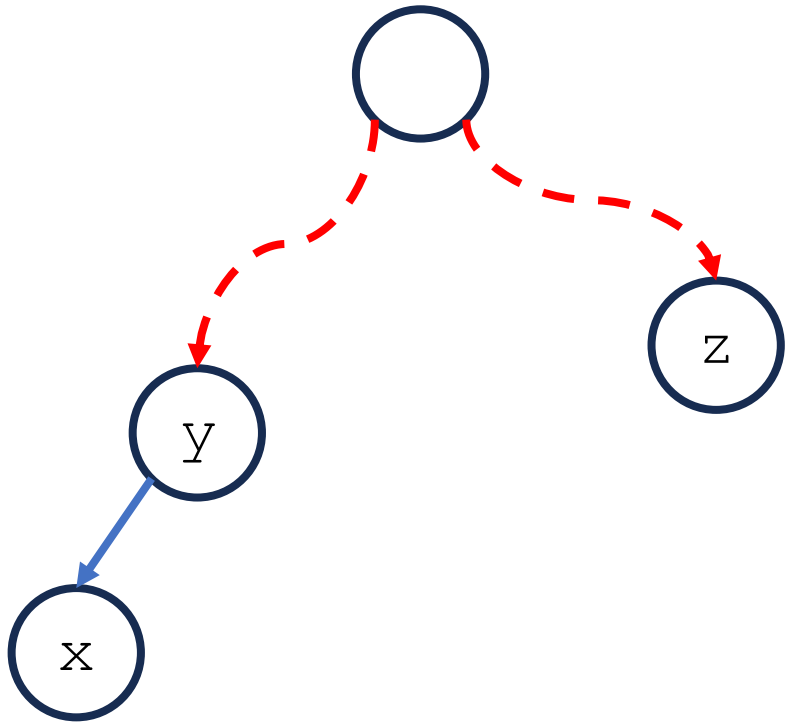
初航我带你，远航靠自己

一、结论1：染色最大值节点



结论1：x 是最大值节点，一旦 y 被染色，下一个染色的一定是 x 节点

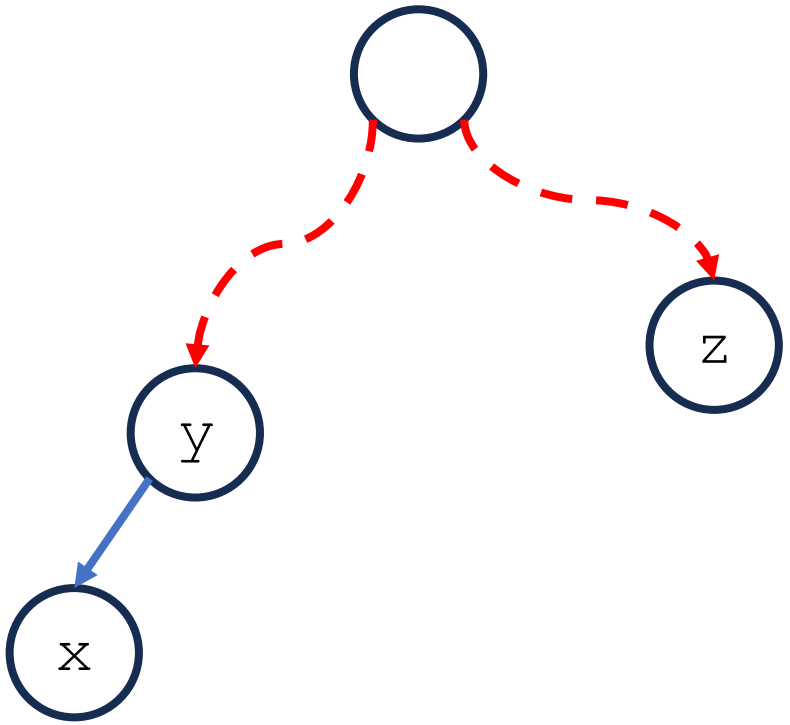
二、观察权值



先染色 z：T*z + (T+1)*y + (T+2)*x

先染色 y： T*y + (T+1)*x + (T+2)*z

三、设置目标：先染色 y



①：T*z + (T+1)*y + (T+2)*x

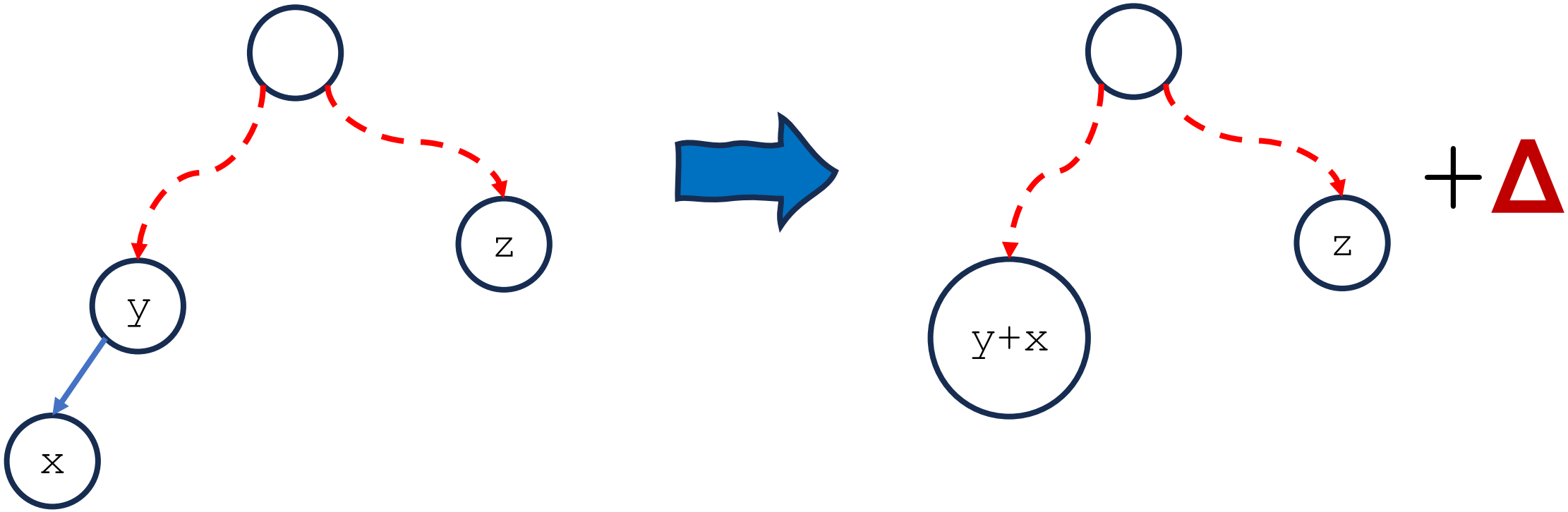
②： T*y + (T+1)*x + (T+2)*z

想要先染色 y，则必须满足 ②<①

则：z<(y + x)/2

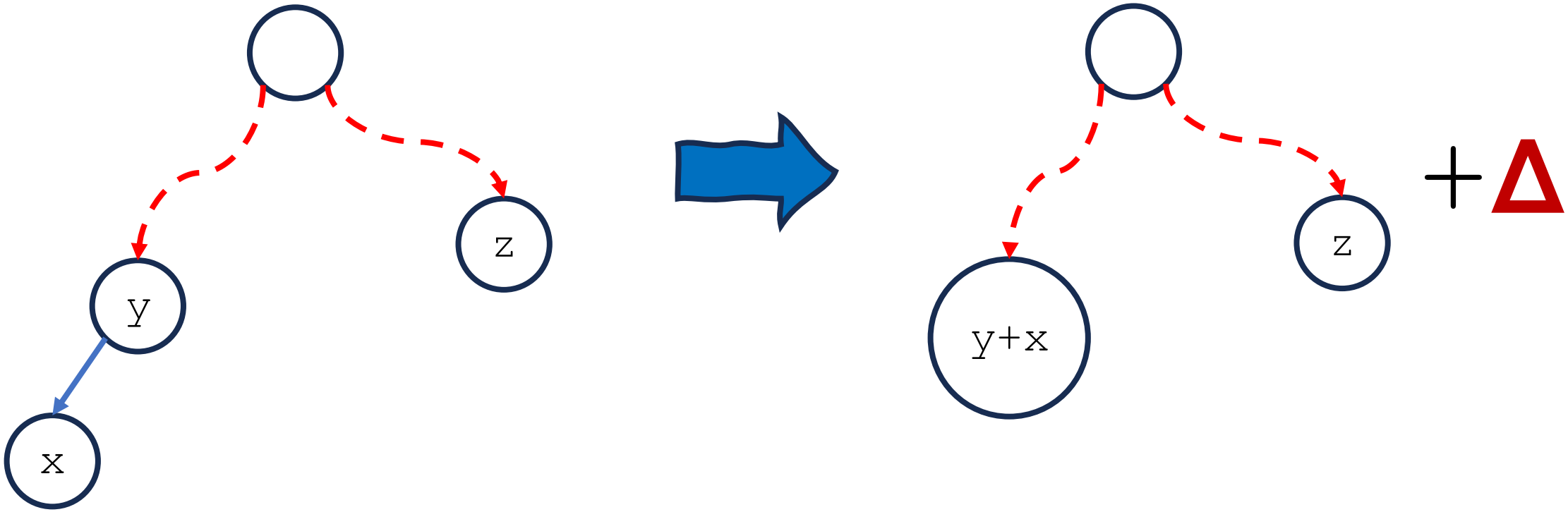
四、等价树形结构

$$T*y + (T+1)*x = T*(y+x) + x$$



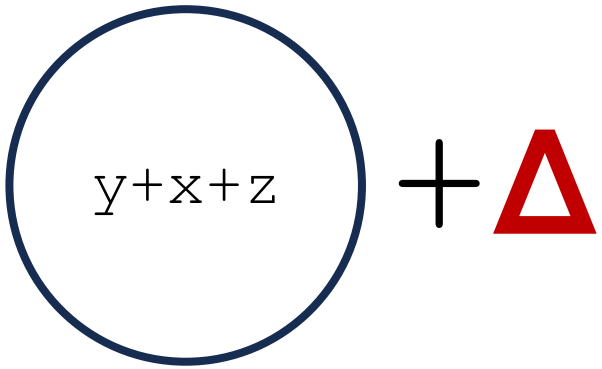
五、等价树形结构

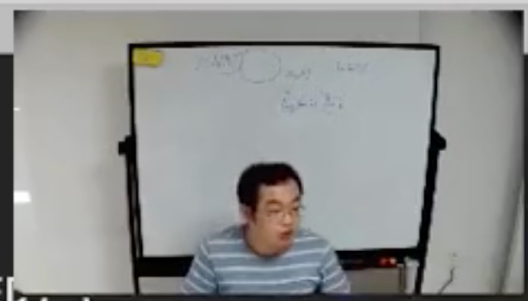
$$T*y + (T+n)*x = T*(y+x) + n*x$$



六、最后的计算

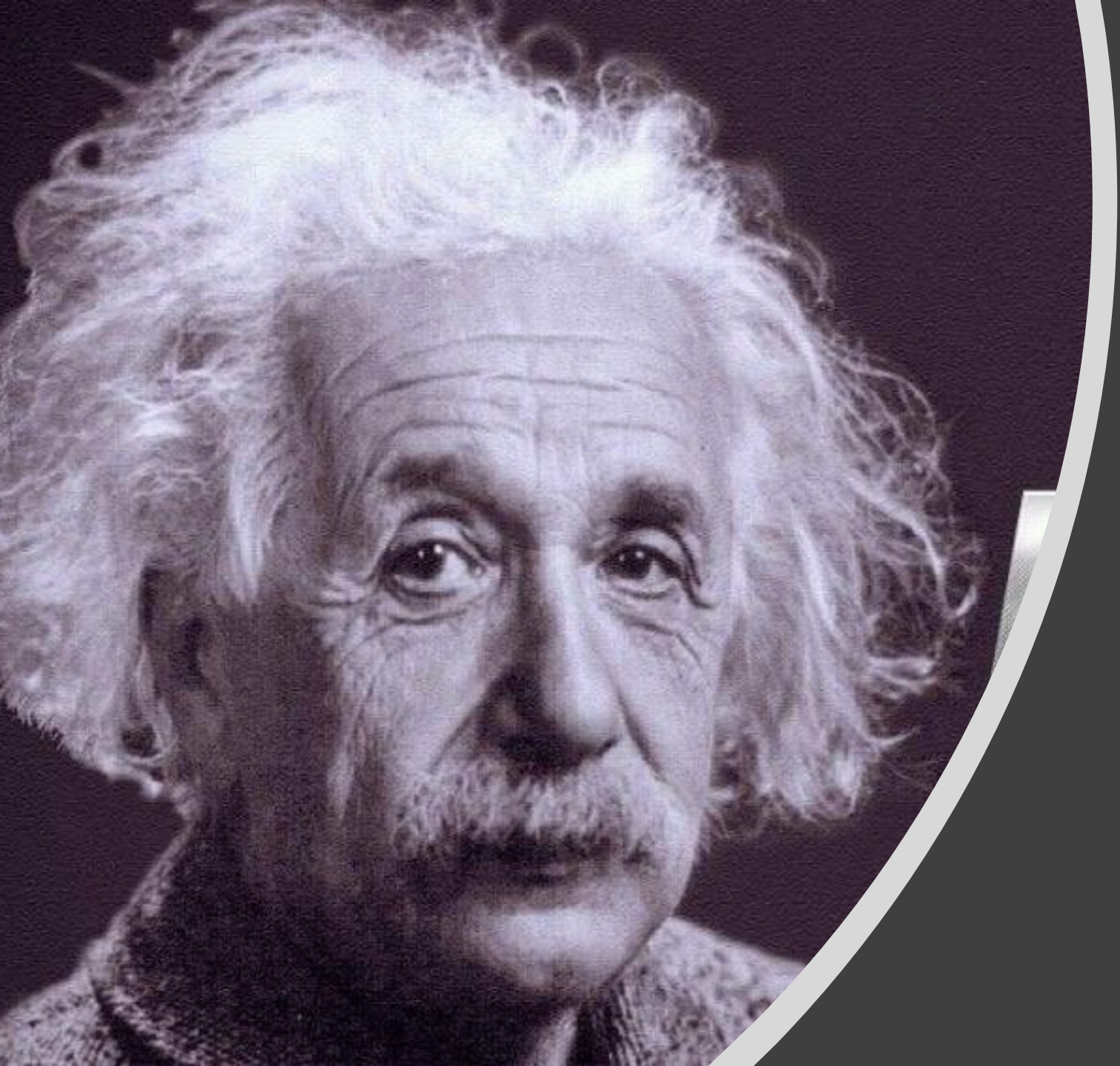
1*根权值 + Δ





```
39 }
40
41 Node *insert_maintain(Node *root) {
42     if (!hasRedChild(root)) return root;
43     if (root->lchild->color == RED && root->rchild->color == RED) {
44         if (!hasRedChild(root->lchild) && !hasRedChild(root->rchild)) return root;
45         root->color = RED;
46         root->lchild->color = root->rchild->color = BLACK;
47         return root;
48     }
49     if (root->lchild->color == RED) {
50         if (!hasRedChild(root->lchild)) return root;
51
52
53     } else {
54         if (!hasRedChild(root->rchild)) return root;
55
56     }
57
58 }
59
60
61 Node *__insert(Node *root, int key) {
62     if (root == NIL) return getNewNode(key);
```

树的颜色-HZOJ-257：代码演示



为什么
会出一样的题目？