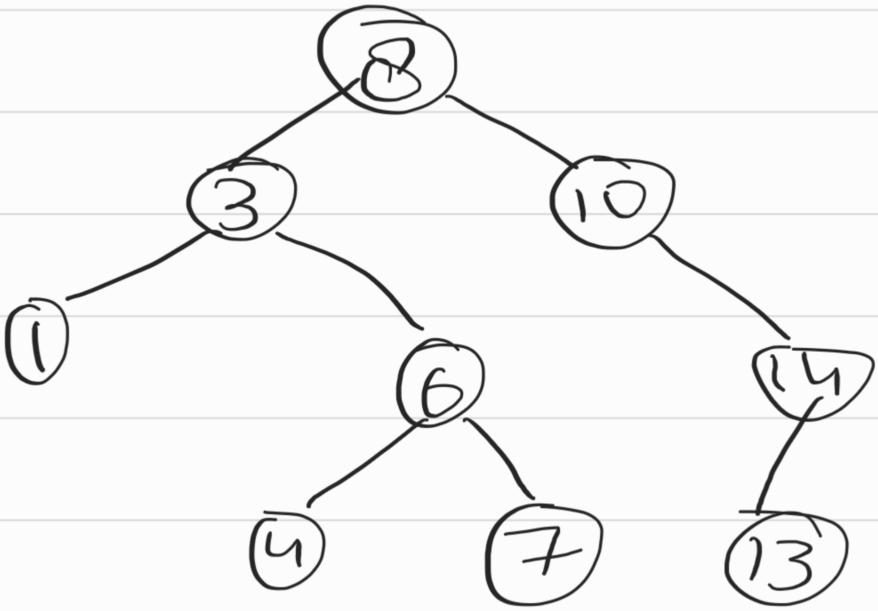
Maximum difference b/w Node & Ancestor



⑧ → 3, 10, 1, 6, 14, 4, 7, 13

diff 5 2 ⑦ 2 6 4 1 5

max

③ → 1 6 4 7

2 3 1 4

Brute force :

- take a root & find diff with its all children
- & update max variable

```
void findMax(root, child) {

    maxDiff = max(maxDiff,
                      abs(root->val -
                          child->val);
  findMax(root, child-left);
  findmax(root, child->right);
}
void findmaxDiff(root) {

    findmax(root, root->Left);
    findmax(root, root->right);

    findmaxDiff(root->Left);
   FindmaxDiff(root->right);


}
```

Optical

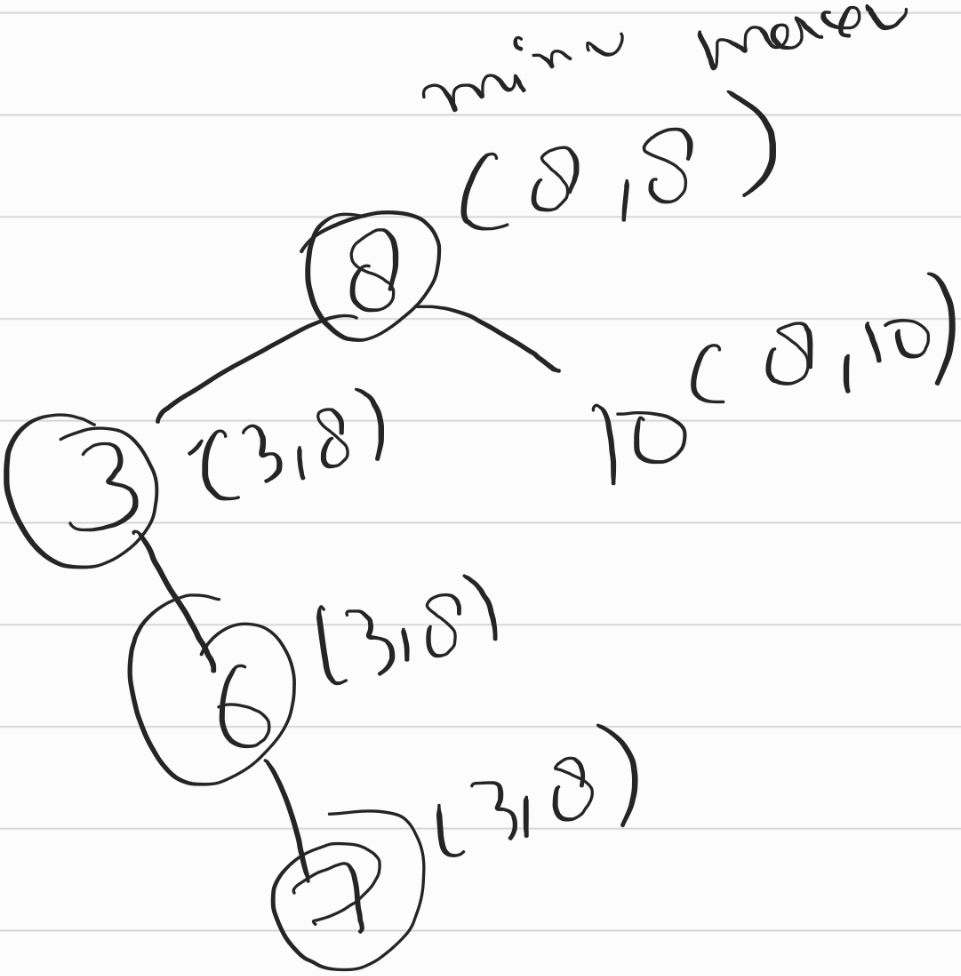
abs(a - b)

a↓ min की min

b↑ max की max

vice-versa

abs(min - max)



```
int  findmaxDiff (root, minv, maxv) {
      if ( root ==NULL
                  return abs(minv - maxv);


        minv= min (minv, root->val);
        maxv= max( maxv, root->val);


        int l= findmaxDiff (root->left, minv,
                                        maxv);
        int r= findmaxDiff( root->right) , ,
                                    ) ,  . . )
        return  max(l, r);
```