1.LeetCode Binary Tree Level Order Traversal

Given a binary tree, print the level number which has maximum number of nodes

2.LeetCode Invert Binary Tree

3.LeetCode Symmetric Tree (mirror tree, 递归+非递归)

4.LeetCode Validate Binary Search Tree

5.LeetCode Same Tree (递归+非递归)

6.LeetCode Kth Smallest Element in a BST

7.LeetCode Binary Tree Zigzag Level Order Traversal

8.LeetCode Flatten Binary Tree to Linked List

9.LeetCode LCA

(1) Find lowest common ancestor in Binary tree. O(log(n))

(2) Find lowest common ancestor in BST tree. O(n)

(3) How can you reduce the time complexity of finding the LCA?

node加一个个pointer指向parent ，转变为Intersection of Two Linked Lists, O(m+n)

10.LeetCode Balanced Binary Tree

11.LeetCode Binary Search Tree Iterator

13.LeetCode Serialize and Deserialize Binary Tree

serialize a 3-ary tree|| The idea is to store an ‘end of children’ marker with every node.

14.LeetCode Binary Tree Vertical Order Traversal

15.LeeCode Path Sum

给一个Binary Tree，找出所有和为k的从root 到 leaf的路径

follow up，如果路径可以任何地方结束

follow up，如果路径可以任何地方开始任何地方结束。

Print path in Binary Tree. 输出所有的 Path Sum

16.Detect a loop in binary tree

Follow up:如果已知90%情况下loop存在于前10 level of the tree.如何optimize?

答:Level order Traversal

17.Binary tree, return the number of nodes with only one child in this tree

答:随意搜索, 只有一个child

18. Convert a BST to a Binary Tree such that sum of all greater keys is added to every key

<http://www.geeksforgeeks.org/convert-bst-to-a-binary-tree/>

19. Given Tree and Node n and int k, print all node which are at physical distance <=k from n.

<http://www.geeksforgeeks.org/print-nodes-distance-k-given-node-binary-tree/>

# 20. Find distance between two given keys of a Binary Tree

http://www.geeksforgeeks.org/find-distance-two-given-nodes/

21. reverse a binary tree and return the head node

这个head node 就是reverse以后没有parent 的node.

比如说

a

b c

d

你要变成

d

c b

a

head node 就是 b d

recursive 搞定