**题目描述: 请实现一个函数按照之字形打印二叉树，即第一行按照从左到右的顺序打印，第二层按照从右至左的顺序打印，第三行按照从左到右的顺序打印，其他行以此类推。**

**代码:**

class Solution {

public:

void add(TreeNode \*root, int level, int printorder){

if (root != NULL){

level++;

if ((int)data.size() < level){

vector<int>tmp;

data.push\_back(tmp);

}

if (data[level - 1].size() == 0)data[level - 1].push\_back(printorder);

data[level - 1].push\_back(root->val);

add(root->left, level, (int)!printorder);

add(root->right, level, (int)!printorder);

}

}

void reorder() {

for (int i = 0; i < data.size(); i++){

if (data[i][0] == 0){ //

int tmp;

data[i].erase(data[i].begin());

for (int j = 0; j < data[i].size()/2; j++){

tmp = data[i][j];

data[i][j] = data[i][data[i].size()-1-j];

data[i][data[i].size() - 1 - j] = tmp;

}

}

else data[i].erase(data[i].begin());

}

}

vector<vector<int> > Print(TreeNode\* pRoot) {

if (pRoot == NULL)return data;

int level = 0;

int printorder = 1;

add(pRoot, level,printorder);

reorder();

return data;

}

vector<vector<int> >data;

};