113. Path Sum II

题目描述： https://leetcode.com/problems/path-sum-ii/

二叉树中找到pathsum = sum的路径，记录下来。

```
Given the below binary tree and sum = 22,
         5
        / \
       4   8
      /   / \
    11  13  4
   /  \    / \
  7    2  5   1
return
[
   [5,4,11,2],
   [5,8,4,5]
]
```
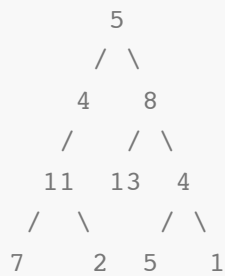
解题思路：

dfs

代码:

```cpp
/**
 * Definition for a binary tree node.
 * struct TreeNode {
 *     int val;
 *     TreeNode *left;
 *     TreeNode *right;
 *     TreeNode(int x) : val(x), left(NULL), right(NULL) {}
 * };
 */
class Solution {
public:
    void findSum(TreeNode* root, int sum, vector<vector<int> > &res, vector<int> &num) {
        if(root == NULL) return;
        num.push_back(root->val);
        sum -= root->val;
        if(root->left == NULL && root->right == NULL) {
            if(sum == 0) {
                res.push_back(num);
            }
            num.pop_back();
            return ;
        }
        if(root->left) {
            findSum(root->left, sum, res, num);
        }
        if(root->right) {
            findSum(root->right, sum, res, num);
        }
        num.pop_back();
        return ;
    }
    vector<vector<int>> pathSum(TreeNode* root, int sum) {
        vector<vector<int> > res;
        if(root == NULL) return res;
        vector<int> num;
        findSum(root, sum, res, num);
        return res;
    }
};
```