54. Spiral Matrix

题目描述： **https://leetcode.com/problems/spiral-matrix/**

给定一个二维数组，输出它的螺旋输出 例如：

```
[[1 ,2 ,3 ,4 ],
 [5 ,6 ,7 ,8],
 [9 ,10,11,12]]
```

转换成：

```
[1,2,3,4,8,12,11,10,9,5,6,7]
```

解题思路：

四个for循环

代码：

```cpp
class Solution {
public:
    vector<int> spiralOrder(vector<vector<int>>& m) {
        vector<int> res;
        if(m.size() < 1)
            return res;
        int l = -1, r = m[0].size() - 1, u = 0, b = m.size() - 1;
        while(u <= b && l <= r){
            for(int i = ++l; i <= r && u <= b; i++ ){
                res.push_back(m[u][i]);
            }
            for(int i = ++u; i <= b && l <= r; i++){
                res.push_back(m[i][r]);
            }
            for(int i = --r; i >= l && u <= b; i--){
                res.push_back(m[b][i]);
            }
            for(int i = --b; i >= u && l <= r; i--){
                res.push_back(m[i][l]);
            }
        }
        return res;
    }
};
```