

54. Spiral Matrix

[link](#)

我写的就是简单的四部一次循环, 注意每次index改变的时候判断

```
public List<Integer> spiralOrder(int[][] matrix) {
    List<Integer> res = new ArrayList();
    if(matrix.length == 0) return res;
    int up = 0, left = 0, down = matrix.length - 1, right = matrix[0].length -
1;
    while(up <= down && left <= right){
        for(int i = left; i <= right; ++i){
            res.add(matrix[up][i]);
        }
        up++;
        if(up > down) break;
        for(int j = up; j <= down; ++j){
            res.add(matrix[j][right]);
        }
        right--;
        if(right < left) break;
        for(int i = right; i >= left; --i){
            res.add(matrix[down][i]);
        }
        down--;

        //        if(down < up) break;这里可以在while循环里面判断
        for(int j = down; j >= up; --j){
            res.add(matrix[j][left]);
        }
        left++;
    }
    return res;
}
```