Leetcode\_200\_NumberOfIslands\_岛屿数量\_深搜\_宽搜\_Medium

# Leetcode\_200\_NumberOfIslands\_岛屿数量\_深搜\_宽搜\_Medium

## 题目介绍

\* 难度：Medium

\*https://leetcode.com/problems/number-of-islands/description/

\* Given a 2d grid map of '1's (land) and '0's (water), count the number of islands.

\* An island is surrounded by water and is formed

\* by connecting adjacent lands horizontally or vertically.

\* You may assume all four edges of the grid are all surrounded by water.

\*

\* Example 1:

\* Input:

\* 11110

\* 11010

\* 11000

\* 00000

\* Output: 1

**\* Example 2：**

\* Input:

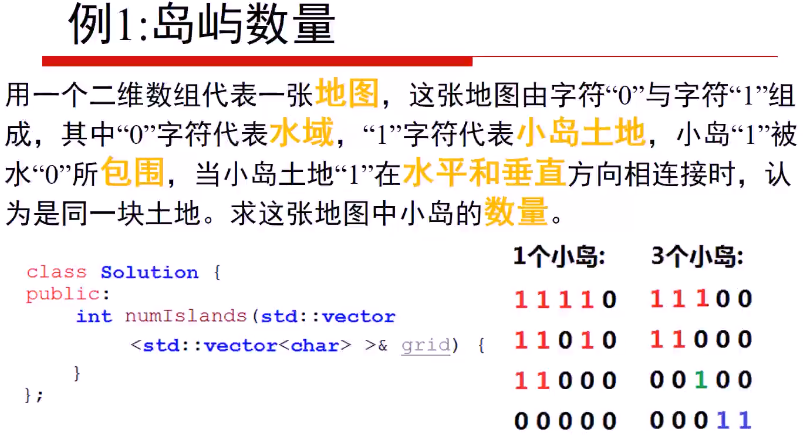
\* 11000

\* 11000

\* 00100

\* 00011

\* Output: 3



## 思路分析

\*思路方法：深度优先搜索与宽度优先搜索。

\* 方法1：深度优先搜索：DFS。

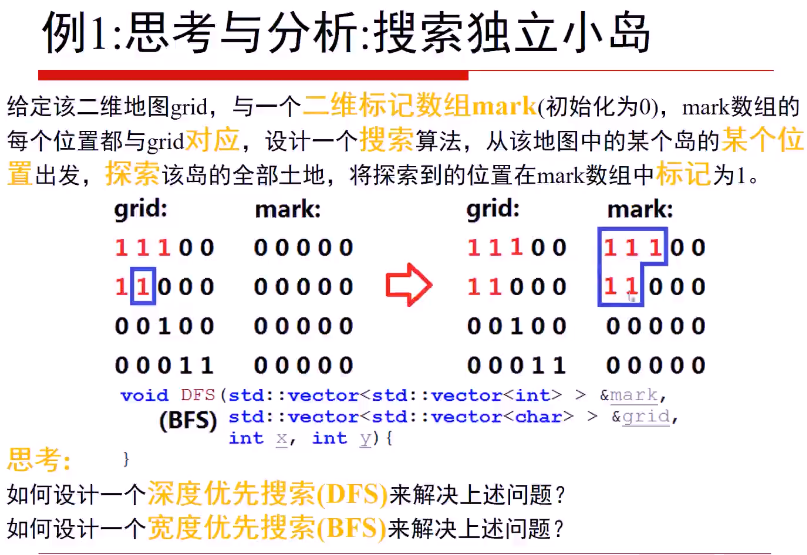
\* 创建一个与grid对应的visited布尔数组，用于标记mark该格子是否已经访问过；

\* 然后利用嵌套循环遍历每一个格子，只有当前格子为1且visited未访问过，

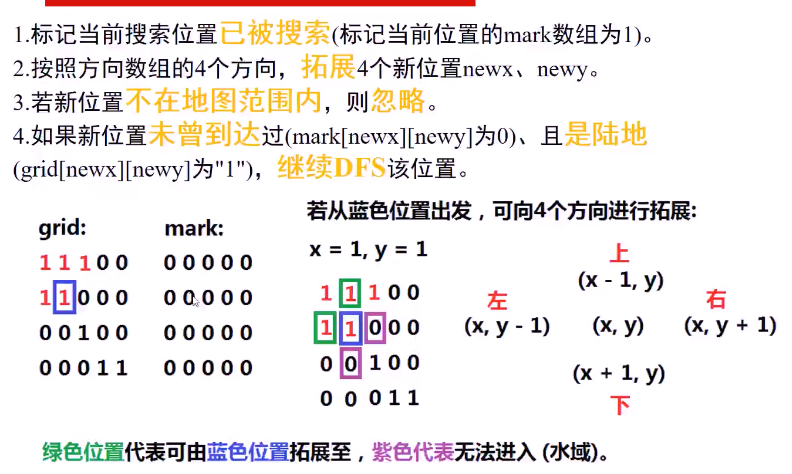
\* 调用DFS搜索该岛屿的所有格子，每一次调用DFS，都会自动递归地将该岛屿

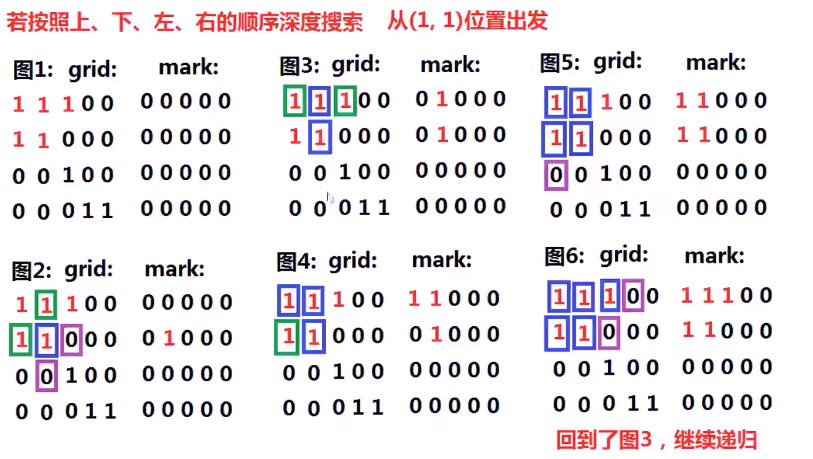
\* 上下左右四个格子都标记为true，同时岛屿计数加一，最后返回岛屿总数即可。

\* 方法2：宽度优先搜索：BFS。



### 深度优先搜索DFS





### 宽度优先搜索

## Java代码

### **深度优先搜索DFS**



### **宽度优先搜索**