#15 Days of Coding Challenge
#Day 11

Number of islands
#Leetcode 200

Solution:

```cpp
class Solution {
public:
    vector<vector<int>> dir={{0,1},{1,0},{0,-1},{-1,0}};
    void dfs(int i,int j,vector<vector<char>>& grid,int m,int n){
        if(i<0 || i>=m || j<0 || j>=n || grid[i][j]!='1') return;
        grid[i][j]='0';
        for(auto d : dir)
            dfs(i+d[0], j+d[1], grid, m, n);
    }

    int numIslands(vector<vector<char>>& grid) {
        int m=grid.size(), n=grid[0].size(), count=0;
        for(int i=0;i<m;i++)
            for(int j=0;j<n;j++)
                if(grid[i][j]=='1'){
                    count++;
                    dfs(i,j,grid,m,n);
                }
        return count;
    }
};
```

Time Complexity: O(n*m)
Space Complexity: O(n*m)