Problem Link:

<https://leetcode.com/problems/maximum-number-of-fish-in-a-grid/submissions/1522850573/?envType=daily-question&envId=2025-01-28>

Solution:

class Solution {

public:

int findMaxFish(vector<vector<int>>& grid) {

int m = grid.size(), n = grid[0].size();

int maxFish = 0;

vector<int> dir = {0, 1, 0, -1, 0};

auto dfs = [&](int r, int c, auto& dfs\_ref) -> int {

if(r < 0 || r >= m || c < 0 || c >= n || grid[r][c] == 0)

{

return 0;

}

int fish = grid[r][c];

grid[r][c] = 0;

int totalFish = fish;

for(int i = 0; i < 4; ++i)

{

totalFish += dfs\_ref(r + dir[i], c + dir[i + 1], dfs\_ref);

}

return totalFish;

};

for(int r = 0; r < m; ++r)

{

for(int c = 0; c < n; ++c)

{

if(grid[r][c] > 0)

{

maxFish = max(maxFish, dfs(r, c, dfs));

}

}

}

return maxFish;

}

};