

```
#include <cstdio>
#include <vector>
#include <cstdlib>

using namespace std;

int A[100][100];
bool V[100][100];
vector<int> vecR; /// Record to-be-explored row
vector<int> vecC; /// Record to-be-explored col

int R, C;
void explore() {
    printf("Start exploration\n");
    int size = 0;
    while(vecR.size() > 0) {
        int row = vecR.back();
        int col = vecC.back();
        vecR.resize(vecR.size() - 1);
        vecC.resize(vecC.size() - 1);
        V[row][col] = true;
        ++size;

        if(A[row-1][col-1] == 1 && V[row-1][col-1] == false) {
            vecR.push_back(row - 1);
            vecC.push_back(col - 1);
            V[row-1][col-1] = true;
        }
        if(A[row-1][col] == 1 && V[row-1][col] == false) {
            vecR.push_back(row - 1);
            vecC.push_back(col);
            V[row-1][col] = true;
        }
        if(A[row-1][col+1] == 1 && V[row-1][col+1] == false) {
            vecR.push_back(row - 1);
            vecC.push_back(col + 1);
            V[row-1][col+1] = true;
        }

        if(A[row][col-1] == 1 && V[row][col-1] == false) {
            vecR.push_back(row);
            vecC.push_back(col - 1);
            V[row][col-1] = true;
        }
        if(A[row][col+1] == 1 && V[row][col+1] == false) {
            vecR.push_back(row);
            vecC.push_back(col + 1);
            V[row][col+1] = true;
        }

        if(A[row+1][col-1] == 1 && V[row+1][col-1] == false) {
            vecR.push_back(row + 1);
            vecC.push_back(col - 1);
            V[row+1][col-1] = true;
        }
        if(A[row+1][col] == 1 && V[row+1][col] == false) {
            vecR.push_back(row + 1);
```

```

        vecC.push_back(col);
        V[row+1][col] = true;
    }
    if(A[row+1][col+1] == 1 && V[row+1][col+1] == false) {
        vecR.push_back(row + 1);
        vecC.push_back(col + 1);
        V[row+1][col+1] = true;
    }
    printf("vecR # = %d", vecR.size());
    system("pause");
}
printf("Size = %d\n", size);
}

int main() {
    scanf("%d %d", &R, &C);
    for(int row = 0; row < R; ++row) {
        for(int col = 0; col < C; ++col) {
            scanf("%d", &A[row][col]);
            V[row][col] = false;
        }
    }

    int count = 0;
    for(int row = 0; row < R; ++row) {
        for(int col = 0; col < C; ++col) {
            if(A[row][col] == 1 && V[row][col] == false) {
                ++count;
                vecR.push_back(row);
                vecC.push_back(col);
                explore();
            }
        }
    }

    return 0;
}

/*
5 9
0 0 0 0 0 0 0 0 0
0 0 0 1 1 1 0 1 0
0 1 1 0 1 1 0 1 0
0 0 1 1 0 0 0 1 0
0 0 0 0 0 0 0 0 0
*/

```