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/*
    Time complexity:  $O(V + E)$ 
    Space complexity:  $O(V^2)$ 

    where V is the number of vertices in the input graph and
    E is the number of edges in the input graph
*/

#include <iostream>
using namespace std;

void DFS(bool** graph, int v, bool* visited, int currentVertex) {
    visited[currentVertex] = true;

    for (int i = 0; i < v; ++i) {
        if (graph[currentVertex][i] && !visited[i]) {
            DFS(graph, v, visited, i);
        }
    }
}

int getIslandGroups(bool** graph, int v) {
    bool* visited = new bool[v]();
    int groupCount = 0;

    for (int i = 0; i < v; ++i) {
        if (!visited[i]) {
            DFS(graph, v, visited, i);
            ++groupCount;
        }
    }

    return groupCount;
}

int main() {
    int v, e;
    cin >> v >> e;

    bool** graph = new bool*[v];

    for (int i = 0; i < v; ++i) {
        graph[i] = new bool[v]();
    }

    for (int i = 0, a, b; i < e; ++i) {
        cin >> a >> b;
        graph[a][b] = true;
    }
}

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        graph[b][a] = true;
    }

    cout << getIslandGroups(graph, v);

    for (int i = 0; i < v; ++i) {
        delete[] graph[i];
    }

    delete[] graph;
}
```