

# NoOfProvinces.java

```

1  package com.example.graph;
2
3  import java.util.ArrayList;
4
5  public class NoOfProvinces {
6      public void dfs(ArrayList<ArrayList<Integer>> adj, int[] vis, int node) {
7          vis[node] = 1;
8
9          for (int ele : adj.get(node)) {
10             if (vis[ele] == 0)
11                 dfs(adj, vis, ele);
12         }
13         return;
14     }
15
16     public int findCircleNum(int[][] isConnected) {
17         ArrayList<ArrayList<Integer>> adj = new ArrayList<>();
18         int n = isConnected.length;
19         for (int i = 0; i < n; i++) {
20             adj.add(new ArrayList<>());
21         }
22         for (int i = 0; i < n; i++) {
23             for (int j = 0; j < n; j++) {
24                 if (isConnected[i][j] == 1 && i != j) {
25                     adj.get(i).add(j);
26                     adj.get(j).add(i);
27                 }
28             }
29         }
30         int[] vis = new int[n];
31         int count = 0;
32
33         for (int i = 0; i < n; i++) {
34             if (vis[i] != 1) {
35                 count++;
36                 dfs(adj, vis, i);
37             }
38         }
39         return count;
40     }
41 }
42

```

## Mutations

- 10 1. negated conditional → KILLED
- 11 1. removed call to com/example/graph/NoOfProvinces::dfs → KILLED
- 19 1. negated conditional → KILLED
- 19 2. changed conditional boundary → SURVIVED
- 22 1. negated conditional → KILLED
- 22 2. changed conditional boundary → KILLED
- 23 1. negated conditional → KILLED
- 23 2. changed conditional boundary → KILLED
- 24 1. negated conditional → KILLED
- 24 2. negated conditional → KILLED

<a href="#">34</a>	1. changed conditional boundary → KILLED 2. negated conditional → KILLED
<a href="#">35</a>	1. negated conditional → KILLED
<a href="#">36</a>	1. Changed increment from 1 to -1 → KILLED
<a href="#">37</a>	1. removed call to com/example/graph/NoOfProvinces::dfs → KILLED
<a href="#">40</a>	1. replaced int return with 0 for com/example/graph/NoOfProvinces::findCircleNum → KILLED

## Active mutators

- CONDITIONALS\_BOUNDARY
- EMPTY\_RETURNS
- FALSE\_RETURNS
- INCREMENTS
- INVERT\_NEGS
- MATH
- NEGATE\_CONDITIONALS
- NULL\_RETURNS
- PRIMITIVE\_RETURNS
- TRUE\_RETURNS
- VOID\_METHOD\_CALLS

## Tests examined

- com.example.graph.NoOfProvincesTest.testFindCircleNum(com.example.graph.NoOfProvincesTest) (0 ms)

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