

# NoOfProvinces.java

```

1  package Graph;
2
3  import java.util.ArrayList;
4
5  public class NoOfProvinces {
6      public static void dfs(ArrayList<ArrayList<Integer>> adj,int[] vis,int node)
7      {
8          vis[node]=1;
9
10         for(int ele: adj.get(node))
11         {
12             if(vis[ele]==0)
13             dfs(adj,vis,ele);
14         }
15         return;
16     }
17     public static int findCircleNum(int[][] isConnected) {
18         ArrayList<ArrayList<Integer>> adj=new ArrayList<>();
19         int n=isConnected.length;
20         for(int i=0;i<n;i++)
21         {
22             adj.add(new ArrayList<>());
23         }
24         for(int i=0;i<n;i++)
25         {
26             for(int j=0;j<n;j++)
27             {
28                 if(isConnected[i][j]==1 && i!=j)
29                 {
30                     adj.get(i).add(j);
31                     adj.get(j).add(i);
32                 }
33             }
34         }
35         int[] vis=new int[n];
36         int count=0;
37
38
39         for(int i=0;i<n;i++)
40         {
41             if(vis[i]!=1)
42             {
43                 count++;
44                 dfs(adj,vis,i);
45             }
46         }
47         return count;
48     }
49 }

```

## Mutations

- 12 1. negated conditional → KILLED
- 13 1. removed call to Graph/NoOfProvinces::dfs → KILLED
- 20 1. negated conditional → KILLED
- 20 2. changed conditional boundary → SURVIVED
- 24 1. negated conditional → KILLED

	2. changed conditional boundary → KILLED
<a href="#">26</a>	1. changed conditional boundary → KILLED 2. negated conditional → KILLED
<a href="#">28</a>	1. negated conditional → KILLED 2. negated conditional → KILLED
<a href="#">39</a>	1. changed conditional boundary → KILLED 2. negated conditional → KILLED
<a href="#">41</a>	1. negated conditional → KILLED
<a href="#">43</a>	1. Changed increment from 1 to -1 → KILLED
<a href="#">44</a>	1. removed call to Graph/NoOfProvinces::dfs → KILLED
<a href="#">47</a>	1. replaced int return with 0 for 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

- Graph.NoOfProvincesTest.testFindCircleNum(Graph.NoOfProvincesTest) (0 ms)

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