Bipartite.java

```
1  package com.example;
2
3  import java.util.ArrayList;
4  import java.util.Arrays;
5
6  public class Bipartite {
7      public static boolean isBipartite(int[][] graph) {
8          int n=graph.length;
9          ArrayList<ArrayList<Integer>>adj=new ArrayList<>();
10 3        for(int i=0;i<n;i++){
11             adj.add(new ArrayList<Integer>());
12         }
13
14 3        for(int i=0;i<n;i++){
15 3            for(int j=0;j<graph[i].length;j++){
16                 adj.get(i).add(graph[i][j]);
17             }
18         }
19
20 1        int color[]=new int[n+1];
21 1        Arrays.fill(color,-1);
22
23 3        for(int i=0;i<n;i++){
24 1            if(color[i]==-1){
25 1                if(dfs(i,0,color,adj)==false){
26 1                    return false;
27                  }
28              }
29         }
30 1        return true;
31     }
32     public static boolean dfs(int node, int col, int color[], ArrayList<ArrayList<Integer>>adj) {
33         color[node] = col;
34         // traverse adjacent nodes
35         for(int it : adj.get(node)) {
36             // if uncoloured
37 1           if(color[it] == -1) {
38 3               if(dfs(it, 1 - col, color, adj) == false) return false;
39              }
40              // if previously coloured and have the same colour
41 1           else if(color[it] == col) {
42 1               return false;
43              }
44         }
45 1        return true;
46     }
47 }
```

Mutations

```
   1. changed conditional boundary → SURVIVED
10 2. Changed increment from 1 to -1 → TIMED_OUT
   3. negated conditional → KILLED
   1. changed conditional boundary → KILLED
14 2. Changed increment from 1 to -1 → KILLED
   3. negated conditional → KILLED
   1. changed conditional boundary → KILLED
15 2. Changed increment from 1 to -1 → KILLED
   3. negated conditional → KILLED
20 1. Replaced integer addition with subtraction → KILLED
21 1. removed call to java/util/Arrays::fill → KILLED
   1. changed conditional boundary → KILLED
23 2. Changed increment from 1 to -1 → KILLED
   3. negated conditional → KILLED
24 1. negated conditional → KILLED
25 1. negated conditional → KILLED
26 1. replaced boolean return with true for com/example/Bipartite::isBipartite → KILLED
30 1. replaced boolean return with false for com/example/Bipartite::isBipartite → KILLED
37 1. negated conditional → KILLED
   1. replaced boolean return with true for com/example/Bipartite::dfs → SURVIVED
38 2. Replaced integer subtraction with addition → KILLED
   3. negated conditional → KILLED
41 1. negated conditional → KILLED
```

```
42  1. replaced boolean return with true for com/example/Bipartite::dfs → KILLED
45  1. replaced boolean return with false for com/example/Bipartite::dfs → KILLED
```

Active mutators

- BOOLEAN_FALSE_RETURN
- BOOLEAN_TRUE_RETURN
- CONDITIONALS_BOUNDARY_MUTATOR
- EMPTY_RETURN_VALUES
- INCREMENTS_MUTATOR
- INVERT_NEGS_MUTATOR
- MATH_MUTATOR
- NEGATE_CONDITIONALS_MUTATOR
- NULL_RETURN_VALUES
- PRIMITIVE_RETURN_VALS_MUTATOR
- VOID_METHOD_CALL_MUTATOR

Tests examined

- com.example.BipartiteTest.testIsBipartite(com.example.BipartiteTest) (0 ms)

Report generated by PIT 1.5.0