RottingOranges.java

```
1   package com.example;
2
3   import java.util.LinkedList;
4   import java.util.Queue;
5
6   public class RottingOranges {
7       static int arr[][];
8       static int n;
9       static int m;
10      static int ans;
11      static int fresh;
12
13      public static void bfs(Queue<int[]> q){
14
15
16          int dir[][] = {{0,1},{0,-1},{-1,0},{1,0}};
17 1        while(q.size()!=0){
18              int x = q.size();
19
20 3            for(int l=0; l<x; l++){
21                  int a[] = q.remove();
22                  int i = a[0];
23                  int j = a[1];
24                  arr[i][j]=2;
25
26 3                for(int k=0; k<4; k++){
27 1                    int newR = i+dir[k][0];
28 1                    int newC = j+dir[k][1];
29
30 10                   if(newR<0 || newC<0 || newR>=n || newC>=m || arr[newR][newC]==0 || arr[newR][newC]==2) continue;
31
32 1                    fresh--;
33                      arr[newR][newC] = 2;
34                      q.add(new int[]{newR,newC});
35                  }
36              }
37 1            ans++;
38          }
39      }
40
41      public static int orangesRotting(int[][] grid) {
42          arr = grid;
43          n = arr.length;
44          m = arr[0].length;
45
46          ans = 0;
47
48          Queue<int[]> q = new LinkedList<>();
49          fresh=0;
50          int zero=0;
51
52 3        for(int i=0; i<n; i++){
53 3            for(int j=0; j<m; j++){
54 1                if(arr[i][j]==2) q.add(new int[]{i,j});
55 2                else if(arr[i][j]==1) fresh++;
56 1                else zero++;
57              }
58          }
59 2        if(zero==m*n) return 0;
60 1        bfs(q);
61
62 3        if(fresh==0) return ans-1;
63 1        else return -1;
64      }
65  }
```

Mutations

```
17  1. negated conditional → KILLED

20  1. changed conditional boundary → KILLED
    2. Changed increment from 1 to -1 → KILLED
    3. negated conditional → TIMED_OUT

26  1. changed conditional boundary → KILLED
    2. Changed increment from 1 to -1 → KILLED
    3. negated conditional → KILLED

27  1. Replaced integer addition with subtraction → SURVIVED

28  1. Replaced integer addition with subtraction → SURVIVED

30  1. changed conditional boundary → KILLED
    2. changed conditional boundary → KILLED
    3. changed conditional boundary → KILLED
    4. changed conditional boundary → KILLED
    5. negated conditional → KILLED
    6. negated conditional → KILLED
    7. negated conditional → KILLED
    8. negated conditional → KILLED
    9. negated conditional → KILLED
```

	10. negated conditional → KILLED
32	1. Replaced integer subtraction with addition → KILLED
37	1. Replaced integer addition with subtraction → KILLED
52	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
53	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
54	1. negated conditional → KILLED
55	1. Replaced integer addition with subtraction → KILLED 2. negated conditional → KILLED
56	1. Changed increment from 1 to -1 → KILLED
59	1. Replaced integer multiplication with division → SURVIVED 2. negated conditional → KILLED
60	1. removed call to com/example/RottingOranges::bfs → KILLED
62	1. Replaced integer subtraction with addition → KILLED 2. negated conditional → KILLED 3. replaced int return with 0 for com/example/RottingOranges::orangesRotting → KILLED
63	1. replaced int return with 0 for com/example/RottingOranges::orangesRotting → 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.RottingOrangesTest.testOrangesRotting(com.example.RottingOrangesTest) (0 ms)

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