Rotting Oranges

Try to solve the Rotting Oranges problem.

We'll cover the following

Statement

You're given an $(m \times n)$ matrix where each cell of the matrix can have one of three values:

- 0 represents an empty cell
- 1 represents a fresh orange
- 2 represents a rotten orange

Every minute, an orange becomes rotten if it's adjacent to a rotten orange in any direction. Return the minimum number of minutes that must elapse until no cell has a fresh orange. If this is impossible, return -1.

Constraints:

- $m ==$ `grid.length`
- $n ==$ `grid[i].length`
- $1 \leq m, n \leq 10$
- `grid[i][j]` is 0, 1, or 2.

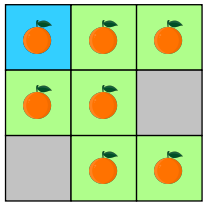
Examples

Sample example 1

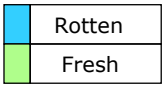
grid	[2, 1, 1]	[1, 1, 0]	[0, 1, 1]
output	?		

Explanation

Minute 0



Key

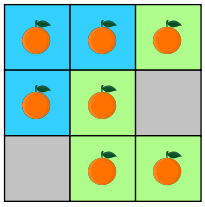


Sample example 1

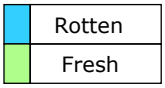
grid	[2, 1, 1]	[1, 1, 0]	[0, 1, 1]
output	?		

Explanation

Minute 1



Key

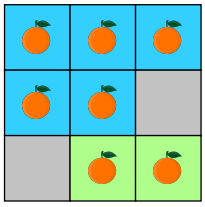


Sample example 1

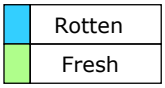
grid	[2, 1, 1]	[1, 1, 0]	[0, 1, 1]
output	?		

Explanation

Minute 2



Key

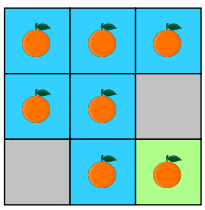


Sample example 1

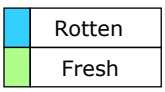
grid	[2, 1, 1]	[1, 1, 0]	[0, 1, 1]
output	?		

Explanation

Minute 3



Key

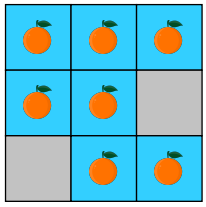


Sample example 1

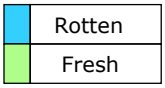
grid	[2, 1, 1]	[1, 1, 0]	[0, 1, 1]
output	4		

Explanation

Minute 4



Key

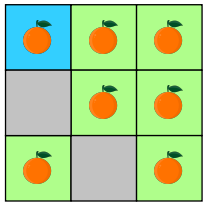


Sample example 2

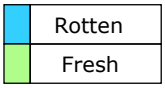
grid	[2, 1, 1]	[0, 1, 1]	[1, 0, 1]
output	-1		

Explanation

Minute 0



Key



Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Rotting Oranges

1 What is the output if the following (3×3) grid is given as input?

$$\begin{bmatrix} 2 & 1 & 1 \\ 0 & 0 & 1 \\ 1 & 1 & 1 \end{bmatrix}$$

A) 3

B) 6

C) 4

Submit Answer

Question 1 of 2
0 attempted

Reset Quiz

Try it yourself

Implement your solution in the following coding playground:

usercode > Solution.java

```
1  import java.util.*;
2  public class Solution{
3      public static int minMinutesToRot(int[][] grid) {
4
5          // Your code will replace this placeholder return statement
6
7          return 0;
8      }
9  }
```

Powered by AI

Submit

Test Cases | Results

Case 1 | Case 2 | Case 3

Input #1

[[2,1,1],[1,1,0],[0,1,1]]

Rotting Oranges

Hide Hint

You might want to go over the Tree Breadth-first Search pattern again.

Mark as Completed