



Lecture 20 : Graphs 1

Deadline

Sep 26, 2022, 11:59 PM

Implementation ●

Problem

Result

Code : Is Connected ?

Python (3.5)

C++ (g++ 5.4)

Java (SE 1.8)

```
1 /*
2  Time complexity: O(V + E)
3  Space complexity: O(V^2)
4
5  where V is the number of vertices in the input graph and
6  E is the number of edges in the input graph
7  */
8
9 #include <iostream>
10 using namespace std;
11
12 void DFS(bool** graph, int v, bool* visited, int currentVertex) {
13     visited[currentVertex] = true;
14
15     for (int i = 0; i < v; ++i) {
16         if (graph[currentVertex][i] && !visited[i]) {
17             DFS(graph, v, visited, i);
18         }
19     }
20 }
21
22 bool isConnected(bool** graph, int v) {
23     bool* visited = new bool[v]();
24     DFS(graph, v, visited, 0);
25
26     for (int i = 0; i < v; ++i) {
```

```
1 #incl
2 #incl
3
4 using
5
6 void
7 vi
8 fo
9
10
11
12 }
13 }
14 int ma
15 in
16 ci
17 ve
18 fo
19
20
21
22
23 }
24 ve
25 is
26 bo
27
28 fo
```