Problem 1971: Find if Path Exists in Graph

Problem Information

Difficulty: Easy
Acceptance Rate: 54.42%
Paid Only: No
Tags: Depth-First Search, Breadth-First Search, Union Find, Graph

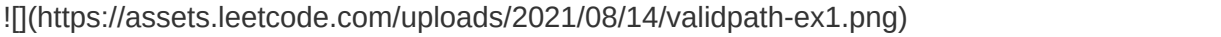
Problem Description

There is a **bi-directional** graph with `n` vertices, where each vertex is labeled from `0` to `n - 1` (**inclusive**). The edges in the graph are represented as a 2D integer array `edges`, where each `edges[i] = [ui, vi]` denotes a bi-directional edge between vertex `ui` and vertex `vi`. Every vertex pair is connected by **at most one** edge, and no vertex has an edge to itself.

You want to determine if there is a **valid path** that exists from vertex `source` to vertex `destination`.

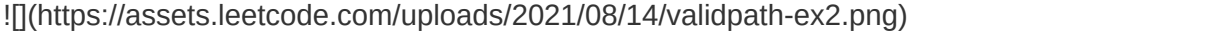
Given `edges` and the integers `n`, `source`, and `destination`, return `true` _if there is a**valid path** from _`source` _to_`destination` _, or_`false` _otherwise_ _._

Example 1:



Input: n = 3, edges = [[0,1],[1,2],[2,0]], source = 0, destination = 2 **Output:** true **Explanation:** There are two paths from vertex 0 to vertex 2: - 0 -> 1 -> 2 - 0 -> 2

Example 2:



Input: n = 6, edges = [[0,1],[0,2],[3,5],[5,4],[4,3]], source = 0, destination = 5 **Output:** false **Explanation:** There is no path from vertex 0 to vertex 5.

Constraints:

* `1 <= n <= 2 * 105` * `0 <= edges.length <= 2 * 105` * `edges[i].length == 2` * `0 <= ui, vi <= n - 1` * `ui != vi` * `0 <= source, destination <= n - 1` * There are no duplicate edges. * There are no self edges.

Code Snippets

C++:

```
class Solution {
public:
bool validPath(int n, vector<vector<int>>& edges, int source, int
destination) {

}
};
```

Java:

```
class Solution {
public boolean validPath(int n, int[][] edges, int source, int destination) {

}
}
```

Python3:

```
class Solution:
def validPath(self, n: int, edges: List[List[int]], source: int, destination:
int) -> bool:
```