Problem 797: All Paths From Source to Target

Problem Information

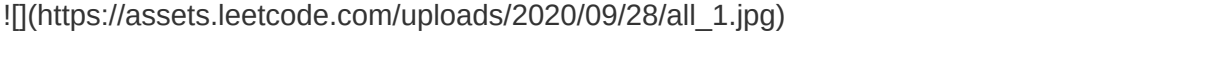
Difficulty: Medium
Acceptance Rate: 83.39%
Paid Only: No
Tags: Backtracking, Depth-First Search, Breadth-First Search, Graph

Problem Description

Given a directed acyclic graph (**DAG**) of `n` nodes labeled from `0` to `n - 1`, find all possible paths from node `0` to node `n - 1` and return them in **any order**.

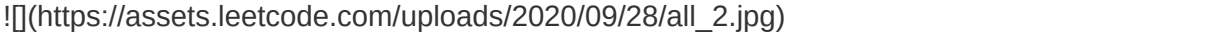
The graph is given as follows: `graph[i]` is a list of all nodes you can visit from node `i` (i.e., there is a directed edge from node `i` to node `graph[i][j]`).

Example 1:



Input: graph = [[1,2],[3],[3],[]] **Output:** [[0,1,3],[0,2,3]] **Explanation:** There are two paths: 0 -> 1 -> 3 and 0 -> 2 -> 3.

Example 2:



Input: graph = [[4,3,1],[3,2,4],[3],[4],[]] **Output:** [[0,4],[0,3,4],[0,1,3,4],[0,1,2,3,4],[0,1,4]]

Constraints:

* `n == graph.length` * `2 <= n <= 15` * `0 <= graph[i][j] < n` * `graph[i][j] != i` (i.e., there will be no self-loops). * All the elements of `graph[i]` are **unique**. * The input graph is **guaranteed** to be a **DAG**.

Code Snippets

C++:

```
class Solution {
public:
vector<vector<int>> allPathsSourceTarget(vector<vector<int>>& graph) {

}
};
```

Java:

```
class Solution {
public List<List<Integer>> allPathsSourceTarget(int[][] graph) {

}
}
```

Python3:

```
class Solution:
def allPathsSourceTarget(self, graph: List[List[int]]) -> List[List[int]]:
```