**Iterative Deepening Search**



* Iterative Deepening Search is guaranteed to find the shortest path if it exists within the specified depth limit.
* It will always return a solution if one exists within the depth limit.
* It may be slower compared to DFS because it explores the same nodes multiple times at different depths.

Therefore, the iterative deepening found the best shortest path from Arad to Bucharest.

**Depth First Search**



* DFS may or may not find the shortest path.
* It can be faster than IDS in some cases because it explores deeper before backtracking.
* It may get stuck in infinite loops or long branches without finding a solution.

Therefore, DFS fails to find the shortest path as it first iterates to the deepest city.