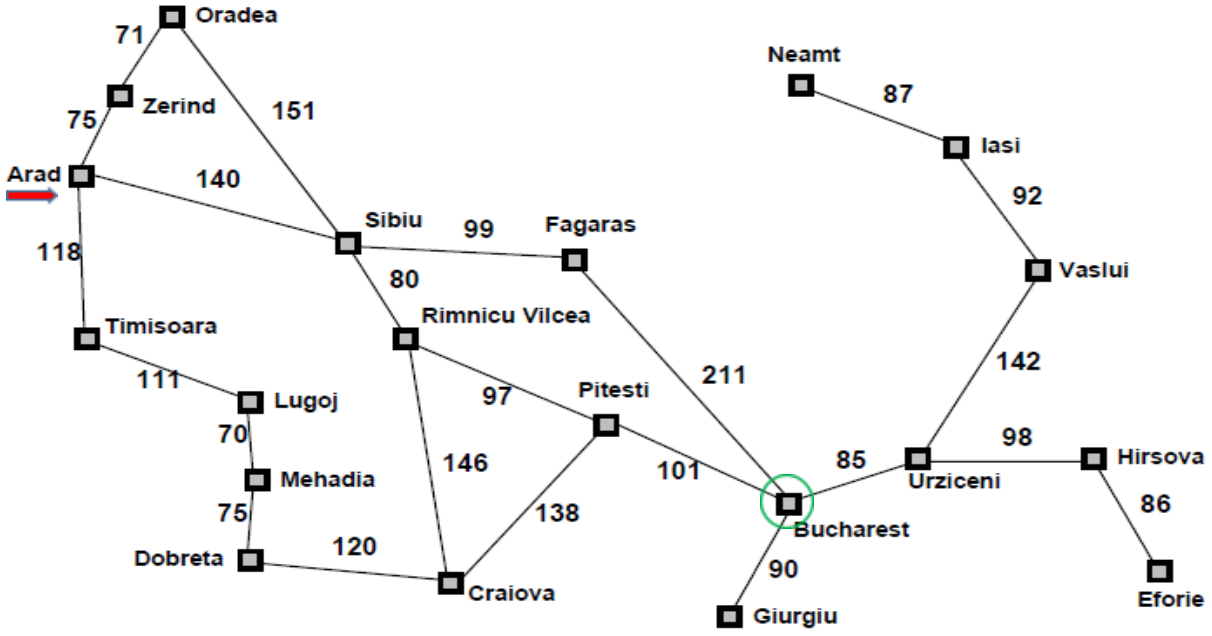
Artificial Intelligence

Due Date/Time	23nd Feb, 2023 11:59 PM
Files to be submitted	Documentation along with code file.
File Naming	Roll_No_Assign_01.pdf Roll_No_Assign_01.ipynb Note: Any assignment that is not according to format will be marked as zero.
Coding Guides	1. Use of proper variable declaration/initialization according to the naming conventions (**camelCase, snake_case, PascalCase**) 2. Use of proper function for each module. Note: Marks will be deducted if not following the above guide line.
Submission Guide line	1. Code along with documentations should be submitted on teams and uploaded to GitHub by due date/time.
Plagiarism	Any kind of plagiarism will result in F grade in course
Weightage	This assignment will be marked on CLOs, also it will be graded for course and lab both. Which means , if you have got 8/10 in this assignment the same marks will be reflected for your lab assignment.

Assignment No. 1

Title: Implementing a Simple Search Algorithm in Python

Objective: To understand the basics of search algorithms and implement a simple search algorithm in Python



Source: Arad

Destination: Bucharest

Task:

1. Research the Depth-First Search (DFS) & Breadth First Search (BFS)Algorithms.
2. Apply DFS and BFS on Romanian example
3. The program should take as input a graph and represents an adjacency list along with source and goal nodes.
4. The program should output the shortest path or optimize path from source to the goal node.
5. Also highlight which of the algorithm outperform other.

Grading Criteria:

- Correct implementation of DFS % BFS 60%
- Clarity and readability of the code 30%
- Proper handling of edge cases and error condition 10%

Note: You may use any libraries or modules in Python that you find helpful, but you should be able to explain how they work and why you used them in your code