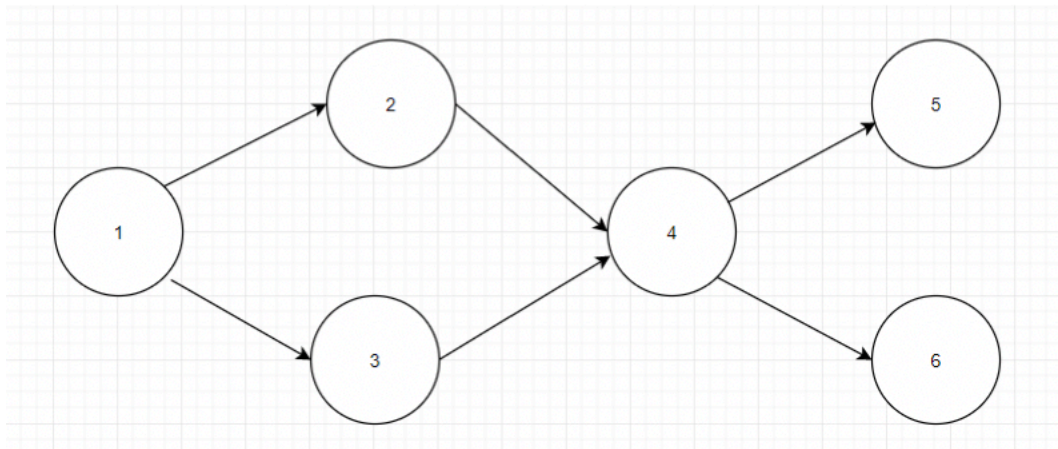Here's a test exercise, it shouldn't take more than few hours to solve.

Write a C# class method taking predefined graph as List<Tuple<int, int>> as input and returning all the paths between two predefined nodes as output.

For example, when asking it between nodes 1 and 4 from the sample data above, program should return [1,2,4], [1,3,4]

There's no need to read test data from input, it can be hardcoded to program.