**CSCI 204 Queue and Stack ADT Workshop**

*This is a part of the 2nd set of homework.*

1. For the given graph of cities represented as Python dictionary, following the algorithm of Depth First Search (stack solution), complete the following tasks.

**graph = {‘A’: set([‘B’, ‘C’]),**

 **‘B’: set([‘A’, ‘D’, ‘E’, ‘F’]),**

 **‘C’: set([‘A’, ‘F’’]),**

 **‘D’: set([‘B’]),**

 **‘E’: set([‘B’, ‘F’])**

 **‘F’: set([‘B’,’C’, ‘E’])**

 **‘G’: set([])}**

* 1. Draw the diagram represented by the above Python dictionary;
	2. Demonstrate the algorithm how to find if there is a path between the city of ‘A’ and ‘F’ by drawing the changes of the stack;
	3. Demonstrate the algorithm how to find if there is a path between the city of ‘C’ and ‘E’;
	4. Demonstrate the algorithm how to find if there is a path between the city of ‘A’ and ‘G’.
1. Do the same using the Breadth First Search (queue solution) using the same data.