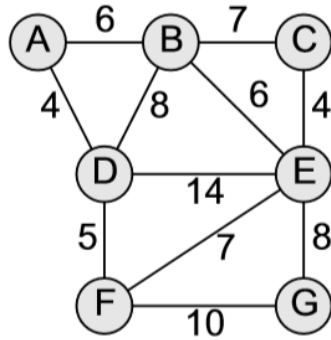# Assignment 9 – Graphs

Problem 1. Given a graph as follows. Do the following tasks:

    a) Represent the graph in the computer's memory by an adjacency matrix.
    b) Represent the graph in the computer's memory by an adjacency list.
    c) Represent the graph in the computer's memory by a weighted matrix.

Problem 2. Use the graph given above and do the following jobs:

    a) Traverse the graph from node D using breadth-first search.
    b) Traverse the graph from node B using depth-first search.

Problem 3. Given an undirected graph with the following adjacency list representation.

1	2 5
2	3 1
3	2 4
4	6 3 7 5
5	4 7 1
6	7 4 8
7	6 4 5 9
8	6 9
9	7 8

    a) Draw the BFS tree obtained by running BFS from the vertex 3
    b) Draw the DFS tree obtained by running DFS from the vertex 3.