TUTORIAL 9

ECE 532

Use the graph in Figure 1 for Exercises 1 through 4.

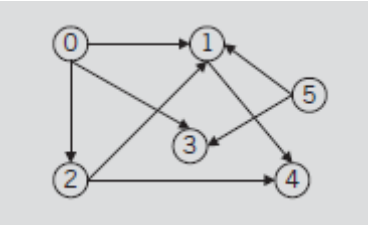

Figure 1

1. Find the adjacency matrix of the graph.
2. Draw the adjacency list of the graph.
3. List the nodes of the graph in a depth-first traversal.
4. List the nodes of the graph in a breadth-first traversal.

5. Find the weight matrix of the graph in Figure 2.

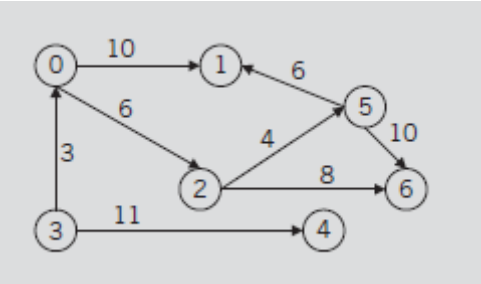

Figure 2

6. Construct the algorithm for breadth first search with the following graph (**Figure 3**). Assume that the first vertex is F.

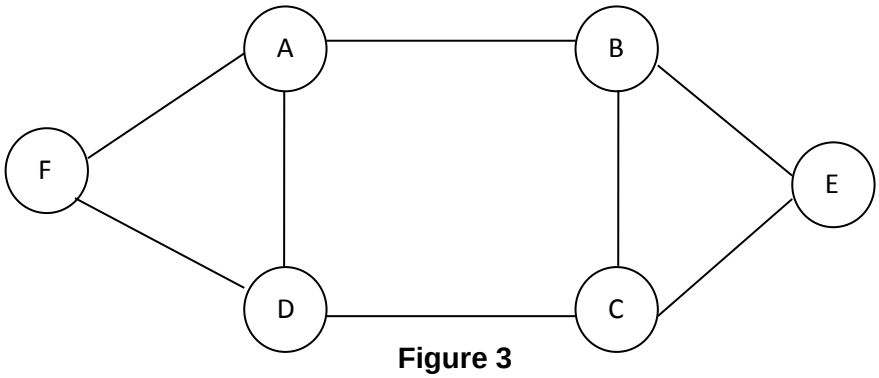

Figure 3

7. For the **Figure 3** , list down the order in which the nodes are visited for Depth first search. Assume that the first node is F.

8. Create an undirected graph based on the adjacency matrix in **Figure 4.**

	v1	v2	v3	v4	v5
v1	0	1	1	0	0
v2	1	0	0	1	0
v3	1	0	0	1	1
v4	0	1	1	0	1
v5	0	0	1	1	0

Figure 4

9. For the **Figure 5**, start with node A, list down the order in which the nodes are visited in case of:

i. Breadth first search

ii. Depth first search.

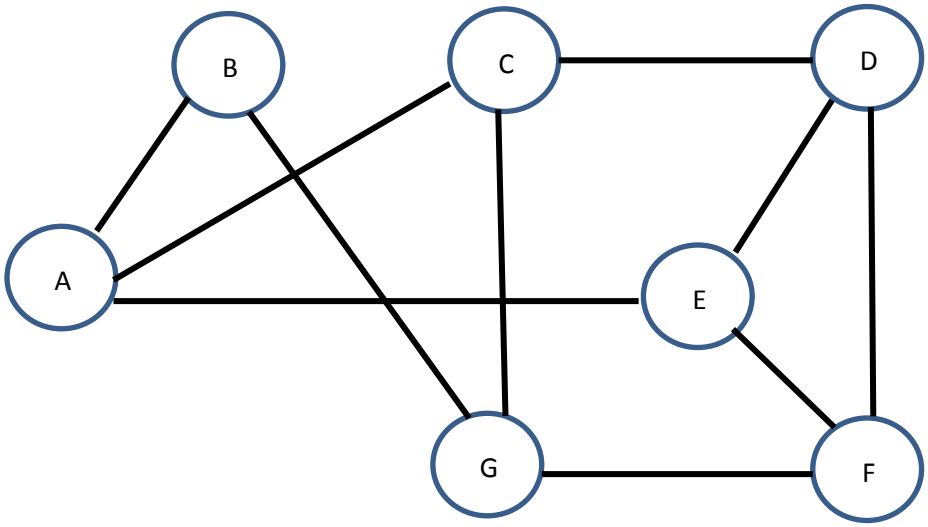

Figure 5

10. For the **Figure 6**, start with node A, list down the order in which the nodes are visited for:

iii. Breadth first search
iv. Depth first search.

For each case show the resulted graphs

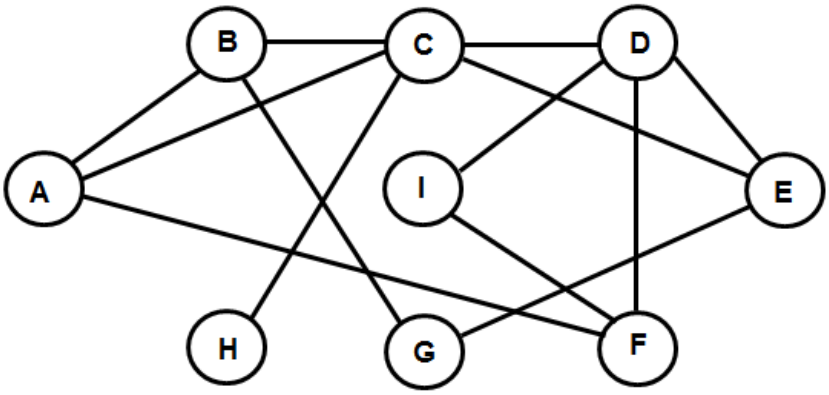

Figure 6