

### TUTORIAL 8

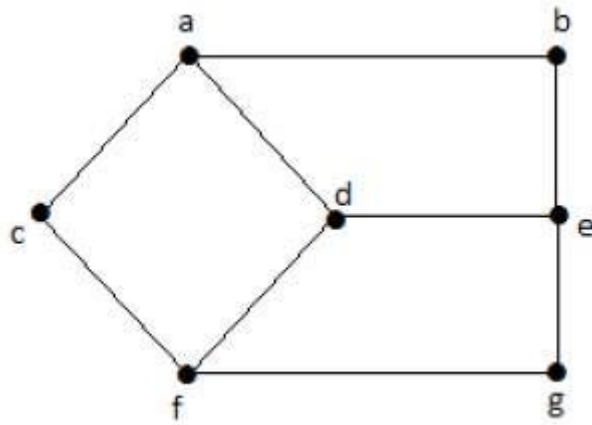


Figure 1

1. Write matrix  $D = d_{ij}$  for figure 1, such that  $d_{ij}$  is the topological distance between  $i$  and  $j$ .
2. List the vertex and edges of the following graph

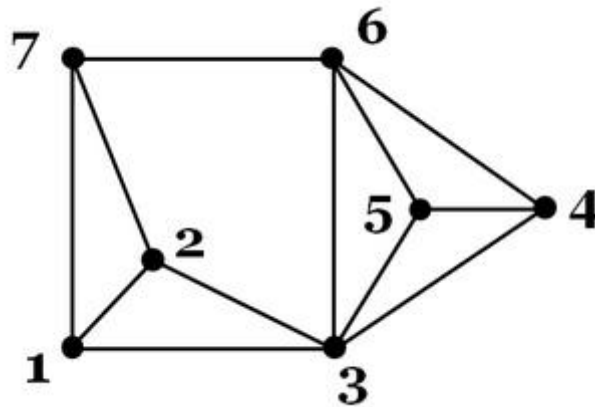


Figure 2

3. 
$$\begin{pmatrix} 1 & 0 & 1 & 0 & 0 & 1 \\ 1 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 1 \\ 0 & 0 & 0 & 0 & 1 & 1 \end{pmatrix}$$

- i. Draw a graph based on the given adjacency matrix
- ii. State the value for indeg and outdeg for each node.