SSN COLLEGE OF ENGINEERING
DEPARTMENT OF CSE

DATA STRUCTURES LABORATORY (CS8381)

Ex. No. 11 Applications of Graph - Topological Sorting

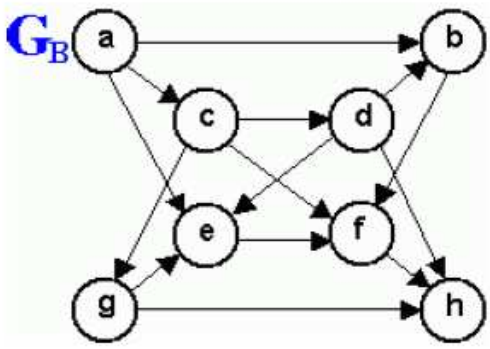
Perform **topological sort** on a directed acyclic graph (DAG) using **Queue ADT** and display the ordering of vertices. Get the number of vertices of the graph and represent the graph using adjacency matrix. Display the adjacency matrix representation of the graph and also its topological ordering.

Write separate functions for the following:

- Create Graph
- Display Adjacency matrix representation of graph
- Display Topological Ordering and check whether graph is acyclic or not

The Graph ADT should contain the structure and functions for reading and displaying graphs. User-defined function for topological sort should be in main program.

Sample Graph



List the order in which the nodes of the directed graph G_B are visited by topological order traversal that starts from vertex a.