**SSN COLLEGE OF ENGINEERING**
**DEPARTMENT OF CSE**

## DATA STRUCTURES LABORATORY (CS8381)

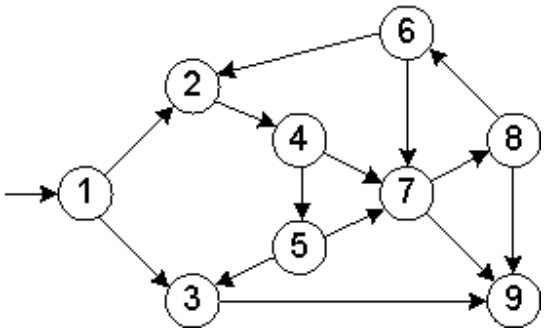
## Ex. No. 10 Implementation of BFS and DFS on Graphs

Get the input for a directed graph using **adjacency matrix** representation. Read the number of vertices and input the edges as long as the user wishes, and display the adjacency matrix representation of the graph. Also perform the breadth first search (BFS) and depth first search (DFS) on the given graph using Queue ADT and Stack ADT respectively.

Write the following functions:

- *Read Graph*
- *Display adjacency matrix representation of graph*
- *BFS*
- *DFS*

Execute BFS and DFS for the following graph:




**Note:** Define the structure of the graph with the members, *no_of_vertices and 2-D array*. Maintain 3 ADTs: **Stack ADT, Queue ADT, Graph ADT**. The Graph ADT should contain the structure and functions for reading and displaying graph. User-defined functions for BFS and DFS should be in main program.