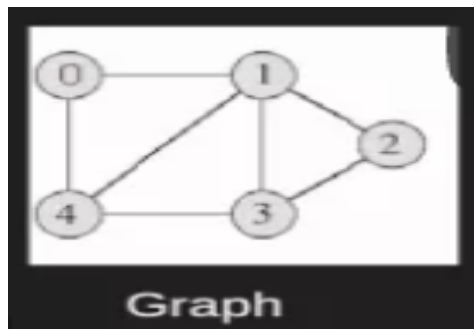


Programming for problem solving II

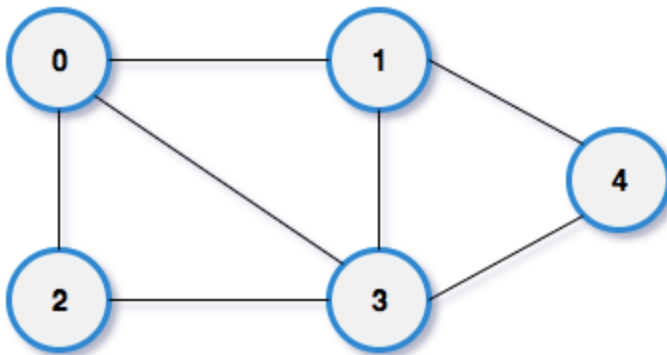
Assignment -----Graphs

Date: 24/052021

- 1) Given a undirected Graph of N vertices: 1 to N, and M edges, consider the representation of the input graph(given next) such that that there is an edge between vertex X and vertex Y, the task is to write a C program to create Adjacency List of the given Graph:



- 2) Given a undirected Graph of N vertices: 1 to N, and M edges, consider the representation of the input graphsuch that that there is an edge between vertex X and vertex Y, the task is to write a C program to create Adjacency Matrix of the given Graph.



- 3) C program to show the bfs traversal of the graph
Input is: 5 vertices (starting vertex is marked as 0)
Take graph data in matrix form as follows:

0 1 0 0 1

1 0 1 1 1

0 1 0 1 0
0 1 1 0 1
1 1 0 1 0

- 4) C program to show the dfs traversal of the graph.
(Note: Use the same input as bfs traversal to see the difference).
- 5) What is the maximum number of possible non zero values in an adjacency matrix of a simple graph with n vertices? Explain your answer and prove it.