DSP LAB Week 7

Week Assignments

Date of submission 28/01/2021 – 08:59 AM

1. **Write a C program to compute number of connected components of an undirected graph.**

You should implement Adjacency List data structure to represent an undirected graph.The implemented adjacency list should be used to compute the number of connected components.

The input graph file name will be provided as a command line argument.

Graph is stored in text file in the following format:

- First line contains number of vertices and number of edges.

- The subsequent lines, each line will have information about an undirected edge.

Sample file for K4 (A complete graph on 4 vertices):

4 6

1 2

1 3

1 4

2 3

2 4

3 4

Output: 2

2. Implement Floyd-Warshall algorithm to find the shortest path between Nodes.
Output should print the adjacency matrix at each iteration and also adjacency matrix with the shortest paths.