CS69011: Computing Lab-1
Task 1: Graph (Part - A)

August 21, 2023

==============================Instructions===============================

1. In the case of user input, assume only valid values will be passed as input.
2. Regarding submission: Create separate C file : <RollNo>_Q1.c, <RollNo>_Q2.c
3. Create a zip file of all these C files in the name: <RollNo>_T1_Part_A.zip and submit it to Moodle.
4. Input is provided from the input file from command line arguments.

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Task

T1. Write a C program of BFS and DFS of the given undirected graph and print the order of nodes visited.

Input / output

Input- first line will be V number of vertices (0 - V-1) and starting vertex
Next V lines contain the adjacency matrix

Input-
5 2
0 1 0 0 0
1 0 1 0 1
0 1 0 1 0
0 0 1 0 1
0 1 0 1 0

Output-
BFS 2 1 3 0 4
DFS 2 1 4 3 0

T2. Write a Program to check if the given graph is connected or not and if it is disconnected output the number of connected components.

Input / output
Input- first line will be V number of vertices (0 - V-1)
Next V lines contain the adjacency matrix

Input-
5
0 1 0 0 0
1 0 1 0 1
0 1 0 1 0
0 0 1 0 1
0 1 0 1 0

Output-
Connected