[CSL202]-Data Structures **2024-25-M**

LAB-X

Date: **Oct 28, 2024**.

You need to upload your solutions of Q1,Q2 and Q3 to canvas portal before 05:30pm on Oct 28, 2024.

1. Write a program to implement the depth-first search algorithm (DFS) and output the DFS tree and classify the edges. Assume that input is given as a adjacency list representation.
2. Write a program to compute the topological ordering of a directed acyclic graph (DAG). You can use the program written in Q1 as a subroutine to solve this problem.
3. Write a program to check whether a given graph is DAG or not. You can use the program written in Q1 as a subroutine to solve this problem.
4. Write a program to compute the number of strongly connected components in a directed graph G.