CSC210 Advanced Algorithm and Design Lab
27/03/2023

Time: 1 Hour
Marks: 100

Instructions
1. Write the programs with proper comments and indentation
2. Create a directory <Admission Number>_<Date> [21JEXXXX_090122], copy all the files into it and **upload in Google Class Room**
3. Submit a single C/C++ source file
4. Do not use STL calls
5. Each program should start with these comment lines:
/*
Name:
ID No:
***/**

Q1. Suppose you are given a directed network having V vertices and E edges. Write a function ALL_PAIR_PATH that applies Floyd-Warshall algorithm to find all pair shortest paths in the network.

The **main()** function:

1. Takes vertices and edge weights. Call the function ALL_PAIR_PATH [10]
2. ALL_PAIR_PATH computes the shortest path between vertex pairs. Compute the cost and print the shortest path between vertex pairs. [40]

Q2. Consider a graph where vertices represent cities and edges represent the traversal cost between two cities. Write a program TSP to find out Hamiltonian tour of the graph with minimum cost.

The **main()** function:

1. Takes vertices and edge weights. Call the function TSP [10]
2. *TSP* will compute the Hamiltonian cycle with minimum cost [40]