UCS415 – Design and Analysis of Algorithms

Lab Assignment 5

1) Write a program to Eulerian path and circuit, given an undirected graph

https://www.geeksforgeeks.org/eulerian-path-and-circuit/

2) Given an adjacency matrix representation of an undirected graph consisting of N vertices, write a program to find whether the graph contains a Hamiltonian Path or not. If found to be true, then print "Yes". Otherwise, print "No".

https://www.geeksforgeeks.org/hamiltonian-path-using-dynamic-programming/

3) Write a program for finding the Hamiltonian Cycle or Hamiltonian Circuit in a graph using backtracking

https://www.geeksforgeeks.org/hamiltonian-cycle/

4) Write a program to implement Ford-Fulkerson algorithm for Maximum Flow Problem

https://www.geeksforgeeks.org/ford-fulkerson-algorithm-for-maximum-flowproblem/

5) Write a program to implement topological sort using Kahn algorithm and DFS.

Additional Questions:

https://www.codechef.com/problems/IITK1P04

https://www.codechef.com/SEPT16/problems/CHEFKC