Department of Mathematics and Computer Science

2301365 Algorithm Design and Analysis Lab #2

Name _____ Student ID _____

Brute Force

A Hamiltonian path (or traceable path) is a path in an undirected or directed graph that visits each vertex exactly once. A Hamiltonian cycle (or Hamiltonian circuit) is a cycle that visits each vertex exactly once. A Hamiltonian path that starts and ends at adjacent vertices can be completed by adding one more edge to form a Hamiltonian cycle and removing any edge from a Hamiltonian cycle produces a Hamiltonian path.
(https://en.wikipedia.org/wiki/Hamiltonian_path)

Write a program (Using a brute force technique) to

1. Determine whether a given graph has a path from given u to given *v* or not (**Path(u,v)**). If there is a path, the program should be able to print that path.
2. Determine whether a given graph has a Hamiltonian path/cycle or not. If there is a path/cycle, the program should be able to print that path/cycle.

Please note that Information will be provided by various sizes of adjacency Matrix