Department of Mathematics and Computer Science

2301365 Algorithm Design and Analysis   Lab #2

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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 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, print that path.

2. Check whether a given graph has a Hamiltonian path/cycle. If there is a path/cycle, print that path/cycle.

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