Experiment 19

Objective: To implement backtracking based algorithms for solving the Graph Coloring Problem and the Hamiltonian Cycle Problem.

Brief Theory:
Graph Coloring: Let G be a graph and m be a given positive integer. We want to discover whether the nodes of G can be colored in such a way that no two adjacent nodes have the same color, yet only m colors are used.

Task: 1) Write a program to find the minimum number of colors to color the vertices of a given graph.

Apparatus and components required: Computer with C or C++ Compiler and Linux platform.

Experimental/numerical procedure: Coding, compilation, editing, run and debugging.

Observation table and calculations based on observations: Not Applicable.