A Novel Approach to Solve Graph Colouring Problem

Abstract

Given an undirected graph \( G = (V, E) \), the graph coloring problem consist in assigning a color to each vertex in such a manner that two adjacent vertex have assigned different colors. The processes of assigning the colors in the graph will done in a manner such that that the total number of different colors used is minimum. Most of the existing algorithms generally deal this problem by taking consideration above constraint during assigning the color to vertices in the graph, but some time above color assignment constraints creates some other implicit constraints which increases the complexity of the algorithms. In this paper we propose an algorithm for graph coloring problem which assign the colors to vertices of the graph with minimum number of colors and without creating any other additional constraints during color assignment that required to be handled explicitly.

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