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## **Survey Paper on Graph Coloring Problem and Its Application**

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**Abstract :** Graph coloring is one of the prominent concepts in graph coloring. It can be defined as a coloring of the various regions of the graph such that all the constraints are fulfilled. In this paper various graphs coloring approaches like greedy coloring, Heuristic search for maximum independent set and graph coloring using edge table is described. Graph coloring can be used in various real time applications like student time tabling generation, Sudoku as a graph coloring problem, GSM phone network.

Keywords: graph coloring, greedy coloring, heuristic search, edge table, sudoku as a graph coloring problem

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