The Sudoku Puzzle

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May 20, 2019

Introduction

Sudoku is a placement puzzle, also known as Number Place in the U.S.A.
The game consists most frequently of a 9 x 9 grid, divided in 9 subgrids with dimension 3 x 3 called "regions".
The purpose is to enter a digit from 1 to 9 (or other symbols e.g. letters, icons) in each cell of the grid so that each row, column and region contains only one instance of each digit.
We implemented a **SAT solver** (Instead of combine backtracking and methods for constraint propagation as other Sudoku solver) to figured out a correct solution for the Sudoku.
Basically the Sudoku is translated into a propositional formula that can be satify only if the Sudoku has a solution.
Once the propositional formula is formulated, The SAT solver tries to find a satisfying assignment that will become the solution for the original Sudoku.

Reduces Sudoku problem to a SAT clause

SAT Solver

Conclusion