

Sudoku game

standard Sudoku contains 81 cells, in a 9×9 grid, and has 9 boxes, each box being the intersection of the first, middle, or last 3 rows, and the first, middle, or last 3 columns. Each cell may contain a number from one to nine, and each number can only occur once in each row, column, and box. A Sudoku starts with some cells containing numbers (clues), and the goal is to solve the remaining cells

Problem Formulation:-

1. initial state:

Generally the puzzles will have enough numbers filled in to get us started and the player will fill every square in a 9×9 grid with one of the digits 1-9. The player is constrained by rules which state that no two of the same number can appear on the same row or column, or within the same 3×3 box.

2. successor function:

Steps after each number are added.

3. goal test:

All squares are numbered 1 through 9, provided that no number is repeated in each row or column.

4. path cost:

It depends on no numbers repeated in each row or column, each added number cost one.

Search Tree :

