Solving Sudoku Programmatically

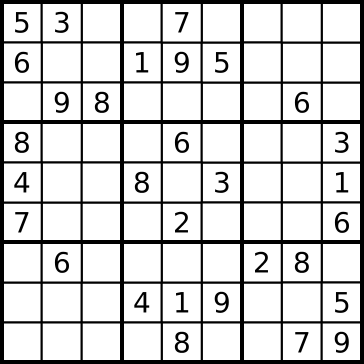
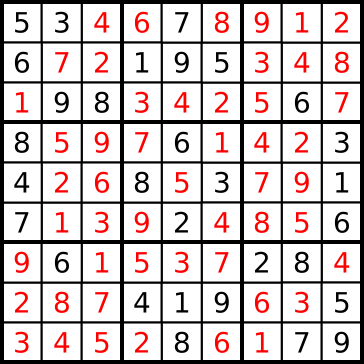
 Solving Sudoku programmatically is a task that is both open ended and complex. Sudoku is a Japanese puzzle that usually consists of a 9 x 9 grid of squares divided into nine rows of nine squares, nine columns of nine squares, and nine 3 x 3 boxes, each with nine squares. Henceforth, these rows, columns, and boxes will all be referred to as groups, as the difference between them is not very important. Some, but not all, squares of an unsolved Sudoku puzzle are filled with the numbers 1 through 9. In order to solve a Sudoku problem, all 81 squares of the puzzle must be filled with a number 1 through 9 so that each group contains no repeated number.

Figure 2. Solved Sudoku Puzzle

Figure 1. Unsolved Sudoku Puzzle

Perhaps the most basic method of solving Sudoku is the brute force method, which will also serve as the basis of our solver program. The brute force method consists of going through each empty position of the Sudoku puzzle and then guessing a value between 1 and 9 to