

Sudoku Solver

Sudoku Puzzles

Sudoku is a popular puzzle where you fill in numbers on a grid, trying to keep certain conditions true. To learn more about how Sudoku works, check out <http://www.sudoku.com>. You'll find a sample puzzle and an explanation of the rules.

Write a program that reads a file containing an unfinished Sudoku puzzle, then solve it and display the results to the screen. The input should simply contain the numbers in the puzzle delimited by spaces on each line.

- 1) You are given a 9x9 grid, with some squares filled in with positive integers in between 1 and 9, inclusive.
- 2) Your goal is to complete the grid with positive integers in between 1 and 9, inclusive, so that each row, column and mini 3x3 square that is designated contain each integer in the range 1 through 9 **exactly** once.

Your program should read in a text file similar to:

```
0 8 0 1 4 0 0 2 5
0 0 7 5 8 0 0 0 0
5 0 0 0 6 2 7 0 1
0 0 0 0 5 0 1 4 7
4 0 0 9 0 0 0 0 0
1 0 0 0 4 0 0 9 0
0 0 4 0 0 5 0 7 0
0 9 3 6 0 7 5 0 0
7 0 0 8 3 0 0 6 2
```

And produce a puzzle that looks like this.

	8		1	4			2	5
		7	5	8				
5				6	2	7		1
				5		1	4	7
4			9					
1				4			9	
		4			5		7	
	9	3	6		7	5		
7			8	3			6	2

Then generate and display the solution. Several sample puzzles are provided for testing. You are free to expand on the problem and provide a user interface. The minimum deliverable is a program that solves Sudoku puzzles.