design doc for Sudoku program.txt

Nickolas Komarnitsky u0717854 01/30/2017 2420 Assignment03 What is the purpose of the project? To write a program to solve a sudoku puzzle.

What classes are to be created and how do they interact?

A Sudoku class, main class, and a test class. The main class will create and run the Sudoku solver. The Sudoku class will contain the code for solving the Sudoku. The test class will ensure that the methods in the Sudoku class run properly.

What is the Set class and how is it going to be used in your program? Why are we using it? (Do not say that Jim told you to...)

The set class is a data structure, it will be used to store the puzzle.

What is the relationship between a 1D array implementation of the puzzle and a 2D matrix implementation?

The 1D array is simply a list of all of the numbers, with the spots with nothing being null. The 2d implementation gives us an actual picture of the puzzle, with numbers having a row and col assignment and blank spots in the array.

Base on your previous experience in CS1410 and CS2420, how much time do you predict this program will take you to write?

I think that this will take me 5-10 hours.

How often do you think the recursive solver will successfully solve a puzzle? How often do you think the constraint solver will solve a puzzle.

I think that the recursive solver wil almost always solve the puzzle, as it is more of a brute force attempt. The constraint solver might have a harder time, solving the puzzle less often, but if the program runs until it verifies that the puzzle is correct then both will always solve it.