ECS 140A: Fall 2023
Homework Assignment 4 part B

Due Date: No later than Monday, December 4, 11:00pm PDT

Problem 5: Using the minidoku program that we explored in class as inspiration, create a sudoku problem solver that works with any 9x9 grid as described in the slide that defines the sudoku problem. Your solution should be really fast when few spaces in the grid are unfilled, but it can be a bit slower when more spaces are unfilled, just like our demonstration in class. You will find the minidoku code in your lecture slides. The skeleton code (i.e., you fill in the missing parts) for the 9x9 solution can be found on Canvas in the Files tab -- look for sudokusolver.txt.

Your program will receive 20 points if it can solve the four test cases included in the skeleton code (five points for each test case) in a combined time of less than one minute. Your program will receive 5 additional bonus points if it can solve test1 (from the lecture slides, not included in the skeleton code) in less than two minutes (or some amount of time to be determined by your TAs). If you think your solution qualifies for the bonus points, be sure to say that in comments at the beginning of your program so that the TAs know to test your program on test1.

Do NOT use the Constraint Logic Programming features provided by SWI-Prolog.

Add your code to the existing skeleton and submit your result via Gradescope as a separate plain text file called "sudoku.pl" (not "hw4b.pl").