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Motivation for why this is an interesting project

   The game requires logical thinking and puzzle skills, and the gui is unlike one that we've coded before. We would delve into different aspects of software development, including algorithmic problem-solving, GUI design, and concurrent programming.

Description of what task/problem you're trying to solve

   We are creating an interactive sudoku game with a GUI. The user would be able to select an amount of time in which to complete the puzzle or they lose. Additionally, when playing the game, they have the ability to check to see if their work is right or not. If they're stuck, they can ask for up to 3 hints.

Description of how and why the project is sufficiently challenging

   There are different parts of it: building a UI of a 9x9 square with 9 3x3 squares inside, each of which has certain components. You need to check rows, columns, and the squares each time a number is placed, which leads it to be complex. Additionally, we need to generate a solvable puzzle initially;

Description of the GUI along with with a sketch

   We will generate a table for the numbers to fall into . It will be a 9x9 box where the numbers would need to be arranged to comply with the rules of sudoku(arranged in the correct order) . We will also have a timer that the user decides the duration prior to the start of the game. THe timer will end the game if not solved before its completion. There will also be a hint button that solves the box of numbers

Description of how your project incorporates networking and/or multithreading

   To generate the numbers, we would generate a random order for the first row and create the following rows depending on that input. The following boxes would check that the boxes in the edges and points (Similar to 1111 Project) so the box, row, or column they are in do not already have the same number as well. This would result in a correct generate that is random every time There would be another thread for the timer and every few seconds, there would be something the time thread does

Description of a testing plan and its deliverables

   Generate a completed sudoku puzzle, remove parts from the puzzle but keep the solution somewhere, create a checker for checking user input and solutions, create a button which solves the selected square, implement the timer as a bonus.

A description of how the manager's workload will be adjusted to account for the extra work they are doing

   Manager checks the test cases rather than writes them