

Group Members: Alex Malave, Lauren Kranis

Group Project: S U D O K U

INTRODUCTION

Sudoku is a logic-based puzzle that we both find fun and entertaining. We'd like to be able to replicate the game using the Python we've learned thus far in Computer Science I, to the best of our ability.

GOAL

We expect to use nested for loops, several object classes (for the UI, the game, etc.), and some randomization (to generate the puzzles, or we could also read from pre-made files [to ensure that they're solvable]) in order to achieve our goal of recreating the popular game in Python. We will attempt to learn how to use the Tkinter module so as to provide the user a friendly UI experience.

Furthermore, in terms of difficulty, we hope to have at least 3 puzzles for users to try to solve (if we fail to come up with a way to generate random solvable puzzle grids). Their difficulty should range from Easy, Medium, and Hard, respectively.

CHALLENGES

We believe the most difficult challenge will be learning how to use Tkinter. Since we didn't cover it in class, it might take us some time to get used its methods. However, we believe that with enough determination, we'll be able to understand how to use it.

The idea of thinking through the logic of a logic-based puzzle might seem a little intimidating, but we believe that with enough focus, time, and dedication, we will be able to create this puzzle from scratch. The hardest part of the logic will most likely be thinking about ways to write the rules of the puzzle in code, and verifying that our math is correct when checking for the puzzle's completion and accuracy.

PLAN

We expect that the largest chunk of the code will consist of two classes: the board itself (i.e., what the user will interact with), and the game itself (i.e., what will constantly regulate user input and check if the game has been won).

When it comes to the completion of this project, we think that it's best if we focus on prioritizing learning how to use Tkinter properly. That way, we can provide a neat, and visually pleasing experience for users.

In general, we expect the UI setup to take us around 3-4 days to learn and master to a relative extent. The game logic should take us no more than 3 days, including relevant commenting and debugging. Lastly, the project writeup should take us no more than 1 day. We consider a day to be approximately 3-4 hours.