Team 8
Tabitha Bishop, Ashley Maurer, Tyler Audino, and Arlen Gyden
https://github.com/COP3502C-UF/project-4-sudoku-team-8.git (master branch)
https://youtu.be/81KmrxHU868
Zybooks Submission by: Tyler Audino

Reflection

All team members worked to collaborate on member-assigned functions in the sudoku_generator file. Arlen Gyden and Tyler Audino worked on the overall graphical user interface (GUI) and the game layout. Arlen Gyden also wrote and debugged the entire Cell class. Tyler Audino wrote the code for the startup menu, game over screen, and buttons during gameplay. Ashley Maurer worked on writing and debugging the SudokuGenerator class constructor, valid_in_row(), valid_in_col(), valid_in_box(), is_valid(), fill_box(), and fill_diagonal() methods. Maurer also worked on the Board class draw(), select(), and click() methods. Tabitha Bishop worked on the Board class clear(), sketch(), place_number(), reset_to_original(), is_full(), update_board(), find_empty(), and check_board() methods. Tabitha Bishop also worked on the remove_cells(), print_board(), some of the constructors, and the final report. The team collaborated on all the finishing touches of the final report and video.

As a group, working together lessened the individual pressure some may face while working alone. We were able to bounce ideas off each other and assist each other when certain functions weren't working or disrupting the flow of code. Each member of the group was flexible, and we were able to manage our time wisely regarding the completion and pacing of the project. Throughout the project, our main issue was with the "fill_remaining" function in the "sudoku_generator" file. For example, it would create an infinite loop and return floats for the remaining boxes. However, we were able to troubleshoot and find where we needed to make adjustments. To fix the float error, we added the "int" function before we called the square root of the row length in the board. We reviewed the valid checking functions to patch the infinite loop and discovered that the error was because two variables were switched in the valid_in_box() method.

If our team were assigned to tackle another project, it would be essential for us to give specific roles in order to upkeep the organization and keep a good workflow. Although our communication as a group was effective, assigning more meetings would be suitable for measuring overall progress and keeping track of critical things that need to be completed. Overall, we operated smoothly, given the circumstances and time constraints.

Throughout this process, Tabitha learned more about why it is important to start with certain classes or functions in order to have a smoother workflow. She also learned the importance of organization and communication through comments when working with other people and through GitHub. Ashley learned the importance of testing functions and how to use GitHub more effectively. Also, communication is important because the classes of this project all come together to create a final project. Tyler learned how to use the pygame module and specifically how to display elements to the GUI using pygame and the use of loops when using pygame. He also learned the importance of communicating with team members to understand how each part of the code has been programmed in order to implement them all together. Arlen learned the importance of properly implementing object-oriented interactions between multiple classes. He also learned the importance of GitHub's branching features, allowing our team to adequately communicate novel coding solutions without mistakenly losing progress through error.