At the beginning of the creation of the Sudoku puzzle for the game suite, the idea was to create three Sudoku puzzles all in a different difficulty level labeled Beginner, Intermediate, and Advanced. The user would be able to go through the main menu, choose Sudoku, then another menu to choose the difficulty of their choice. Going through it seemed as if it could be done, but trying to keep the simplistic nature, I decided to just create one difficulty level and have various games. The errors or issues that I came about with the three different difficulty levels was having to create another menu within the Sudoku puzzle itself. The layout was there, but the coding was giving me troubles. I gave it about a week to see if I could get something to produce from it, but I kept receiving the same error. Through using Stack overflow for research options and to gain the knowledge of how to configure a working product, it turned to be a dead end.

Moving forward, product being produced is the Sudoku game with one difficulty level, across various games. The user can start a new game, check their progress, and exit. Once they complete the game, clicking exit will take them to the main menu so that a new game can be chosen. Creating the code for this version of the game did not generate too many errors, but there still were some. The Sudoku game was broken down into three separate packages: controller, model, and view. This made the layout more simplistic and where and what needed to be done for the final solution. The controller package would allow the member to choose the button control and sudoku puzzle controls. The button controls display to the user to select new game, check game and exit game. The sudoku puzzle controls display to the user the numbers as well as the help. The user can be able to choose if they would like the help on or not. If the help is on, then it will display a blue background once the number is chosen. This shows the user the number chosen goes in the appropriate boxes. The model package would entail the game code and the action code. The game code would let the user know that the numbers 1-9 would only be allowed in each 3x3 block, as well as in each horizontal and vertical line. No numbers would be able to repeat and that each block will hold the correct number chosen. Using the check button, user will be able to check to make sure the numbers are being inputted in the appropriate box. Lastly, the view package holds the main class, which is the Sudoku class, the button panel, the field, and the sudoku panel. The view package brings everything together that is ran form the Sudoku class.

Calendar

Description automatically generated

Figure 1: User is presented once Sudoku is chosen from the main menu.

A screenshot of a computer

Description automatically generated with low confidence

Figure 2: User selects number, with the help on, shows where that number belongs.

Table

Description automatically generated with medium confidence

Figure 3: User checks progress, Green annotates that number is entered in correct block, Red annotates that number is incorrectly entered in block.

Table

Description automatically generated

Figure 4: User has completed the game. User can select New Game to play again (new game board generated) or Exit Game to be directed to the main menu.