10. Sudoku Helper: Backup and Restore
CSCI 4526 / 6626 Fall 2022

1 Goals

- To save and restore the state of the game

2 Modify the Game class.

The menu.

- In your Game class, activate the Save and Restore menu items.

- Save: Read an output file name from the keyboard and open it. The file will be used to save the state of the game for a later Restore operation. Use the file to save the Frame at the top of the undo stack. Delegate to Frame::serialize() the task of saving the current state of the board to the open file.

- Restore: Read the name of a save-file from the keyboard and open it for input. Clear the undo and redo stacks, and push a new Frame* onto the undo stack, ready to receive the saved game from the open file. This new Frame will be the only item on the undo stack. Delegate the actual input operations to the Frame::realize. Finally, delegate to Board::undo() the task of using the newly-input Frame to overwrite the current state of the board.

3 Modify the Frame class.

- Implement a function `serialize( ofstream& gameOut)`. The function will be called from the Save menu item in Game::run to write the current Frame to the open output stream.

- Implement a function `realize( ifstream& gameIn)`. The function will be called from the Restore menu item in Game::run. It will read in a saved game from the open input stream.

4 Submission.

Submit the source code and proof that it works in the form of a text file that contains a copy of your screen output. Please do not expect me to compile the program and run the test.