Final Deliverable

Design Document

Group 13

System Design:

For our final deliverable we have prepared a fully functional game of checkers. The game includes a single and multi-player experience as well as score boards to document and save the wins and losses. These saves will only be documented for single player games. Upon launch of the game the user will be taken to the main menu of the game, where the user will then choose whether he/she would like to go play the game, either in single or multi-player, view the score boards or quit.

The single player experience is played against a fairly smart AI. This AI takes advantage of the MiniMax AI system allowing for an intermediate difficulty. Whenever a user makes a mistake, like not moving the proper piece, the messages will be shown on the command prompt. As well, our boards show which piece on the board is the current starting position by a highlighted square. If the player wishes to click on another piece to move instead, the player must have the specific piece they wish to move highlighted.

The multi-player experience is quite similar to the single player experience, the only difference is that there no longer is an AI; rather the opponent is a human player. The errors will also be prompted on the command prompt.

The score board contains all the wins, losses and games played from the single player experience. The way that this scoring system works is that every end game, whether it be a win or loss, will always append a game played to the scoring file and then the win/losses will append accordingly. The data is saved onto a file under the src/ directory using Java Serialization. Within our testing units there is a score board tester, this simply gets the scores respectively, since we do not wish to overwrite any scores. If the file does not exist or is empty a new file will be created and all scores will be reset to zero.