HW3 Othello Report

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*Game Rules*

The game space starts out as an 8x8 grid of green squares. The player will make the first move by clicking on one of the green squares this will place a white piece on the square. Then the computer will take its turn and place a black piece. Once a piece is placed on the board the only way to interact with it, is to place a piece of the other color next to it, if there is a straight unbroken line of pieces between the placed piece and the first piece of the same color along that line, then this will cause all of the pieces in-between the two end piece to be tuned to the other color. After the player's piece is placed on the board. The game ends when all of the 8x8 board has no more empty squares. The winner is determined by who has more pieces of their color on the board when the game ends.

*Game AI*

The AI evaluates the board state by passing the board array to the heuristic function that counts the number of black pieces and subtracts the number of white pieces in the board array. It then calls the MinMax function passing in the current board array and the number of times it should recursively call itself then calls the heuristic function on it. MinMax then determines the number of possible moves it can make in the current board array and creates a recursive call for each of the possible move. It passes a board array with a different move made into each recursive call. Once the player has made their move the AI will analyze all its possible moves and using the heuristic pick the best one, trying to take as many of the player’s pieces as possible while protecting its own.. This will continue until all the spaces have been claimed.

*Goal*

The goal of this game is to claim as many spaces on the board as you can while protecting your pieces and taking your opponents. It should be a fast fun game that plays out differently each time as both the player and the AI pick different spaces on the board and react to each other's choices.

Problems

We are not able to resolve a compiler error that is preventing the game from starting. It has something to do with trying to retrieve the position of the objects to put them into the global array that represents the board state for the AI. We cannot resolve this issue no matter what we try we can’t find an answer online despite searching for over 5 hours, but we believe the logic of the code and the AI scripts is sound.