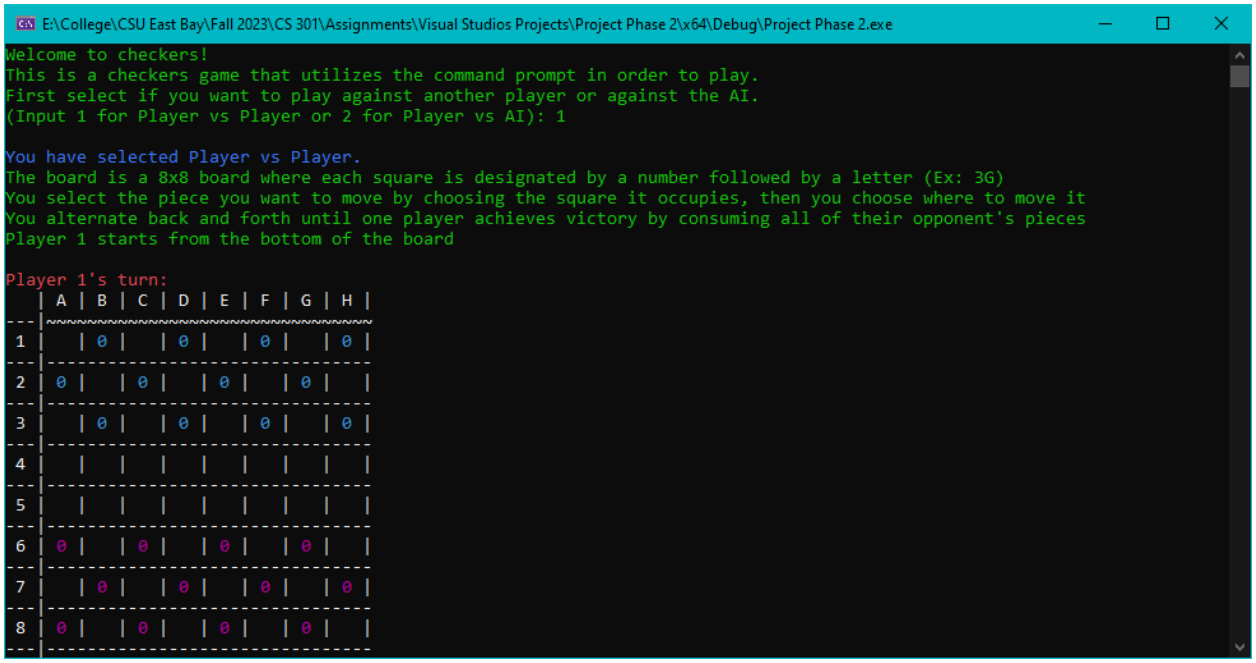
Final Report

Layers completed: 2 layers have been completed

Project Summary: Our project is to design a checkers game that takes user input to select and move their desired pieces on the board in order to win using the command prompt. The user will get to choose if they want to face off against another player on the board or against an AI. They will be prompted to choose the checker piece that they want to move and where to move it. The AI will be using a random number generator in order to make a random move that is available to it. The AI could be improved so that it will always choose the option to jump over its opponent's piece if available

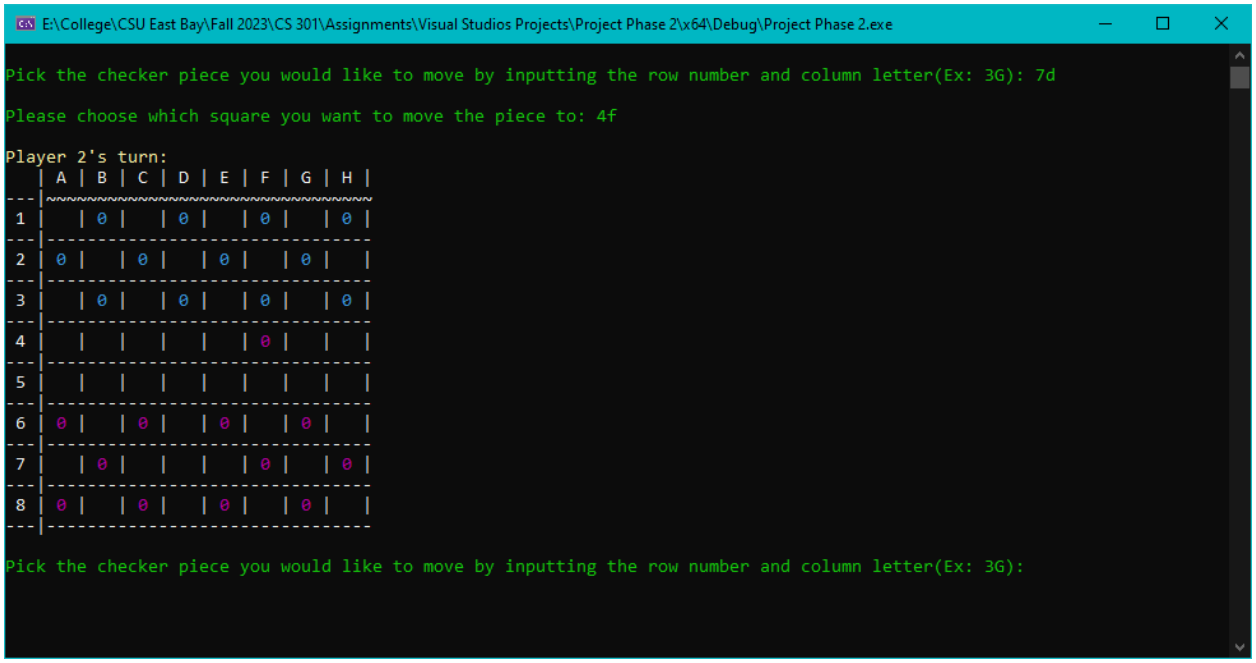
User Interaction with the program:

First off, we ask the user to choose their mode. Only player vs player mode has been implemented so the user would input 1 to start the program. The program would then print out the board and ask for input (Screenshot below).



The user interacts with the program by inputting the position of the piece they want to move. For example: they would input the row number followed by the column letter. They would then input the position of where they want to move it too. The board is printed out

once again and asks for input from player 2. It continues in this fashion until a player has won and a message gets printed out (Screenshot below).



What has proved to be harder (or easier):

- We encountered several challenges and design revisions. One of the significant aspects that was harder than expected was the Piece object related information. In phase one of our project, we focused on implementing the move function for moving the piece. However, as the development process progressed we realized that additional functionalities were required. To address these challenges we implemented the following new functions: vector<Piece> Piece::updatePiece, Piece::returnID, int Piece::returnRow, int Piece::returnColumn and string Piece::returnLabel.
- We also came across the issue of the checkerboard looking too plain and the spaces being indistinguishable from one another. This required us to search for a method to colorize the board and make it look more presentable.
- Another challenge we encountered was carrying the different data into different files and making sure it was updated correctly in the main function to reflect those changes