Performance Testing:

Performance testing will be tested using the performance function built into the Google Chrome Web Browser.

1. AI generating a move in AI chess match:

This performance test will determine the time that it will take for the AI to make a move after a player has made a move in a game of chess. The function will be tested for each difficulty as well as 20 separate moves over the course of the game of chess taking the average time of each move.

Results:

* Easy: 215.23ms
* Medium: 197.17ms
* Hard: 3138.23ms

1. Joining a game with another player in PVP chess match:

This performance test will determine the time that it takes for a match to begin once a player has challenged another player in the lobby for a PVP chess match. This will be tested 5 different time taking the average times for the function.

Results: 82.4ms

1. Alerting a player that the opponent has left the match:

This performance test will determine the time that it takes for the player to be notified that the opponent has left the match. This will be tested 5 different time taking the average times for the function.

Results: 11.06ms

1. Alerting a player that the game has ended:

This performance test will determine the amount of time that it takes for a player to be notified that the game has ended and display if they have won or lost the game. This will be tested 5 different time taking the average times for the function.

Results: 77.6ms

1. Wait time for a player move to generate on opponent’s board:

This performance test will determine the amount of time that it takes for a move to be made on the opponent’s GUI, after a player has made a move. This will be tested 5 different time taking the average times for the function.

Results: 61.88ms