Chess Game GUI - Manual Test Plan

Test #1: Chess Game GUI
Run the Chess application. This will open up the GUI in a new window called "Chess Game". This view should show the following chessboard configuration:


The announcement box at the bottom right should tell it's the white player's turn. And the "Forfeit game - Black" button should not be enabled.

Note that the chessboard configuration has the standard chess pieces set up for a game, and that the queens are played on squares of their color.

Test #2: Entering player's names

Try entering player's name in the text fields next to the indicated "Black player -" and "White player -" text. You should be able to click and enter any name.
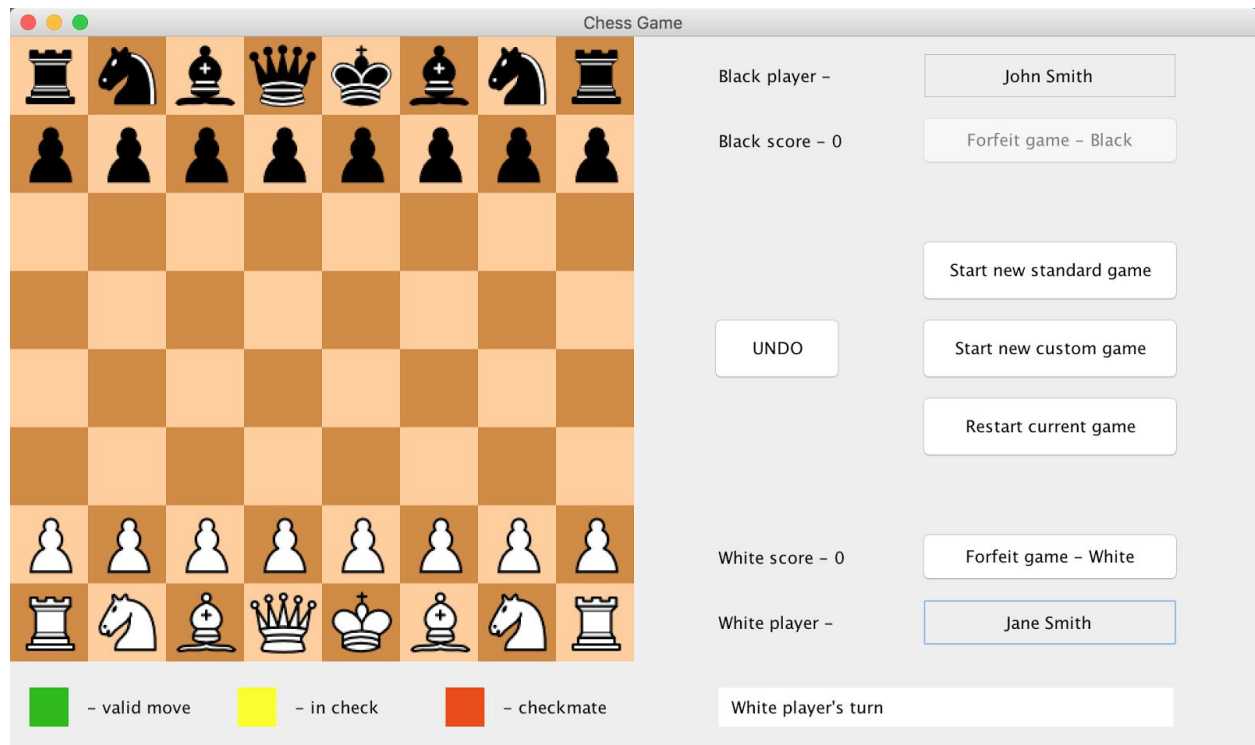
The Chess application will look as above. Note that the game states have not changed. It is still the white player's turn, and the "Forfeit game - Black" button is still disabled. Also the Chess board should look unchanged.

Test #3: Select a piece to move.

Let's try moving a piece. Since it's the white player's turn. Let's click on any white Chess piece. For example I will click on a white Pawn piece. And the game state should look as follows:

Note that it is still the white player's turn, since a piece has not been moved yet. You have only clicked on a piece. And the "Forfeit game - Black" button remains disabled.

Test #4: "valid move" highlighted square

When a Chess piece has been clicked on, but has not yet been moved to different square, you should be able to see the valid move squares highlighted in green. This indicates all the valid squares to which a piece can move to legally.

Test #5: Select a valid move square to move a piece
Now that we are given with a selection of valid move squares to move to that are highlighted in green, let's click on one of the green squares to move the piece to that position. I will click on the square closest to the white pawn, so my GUI should render as follows:
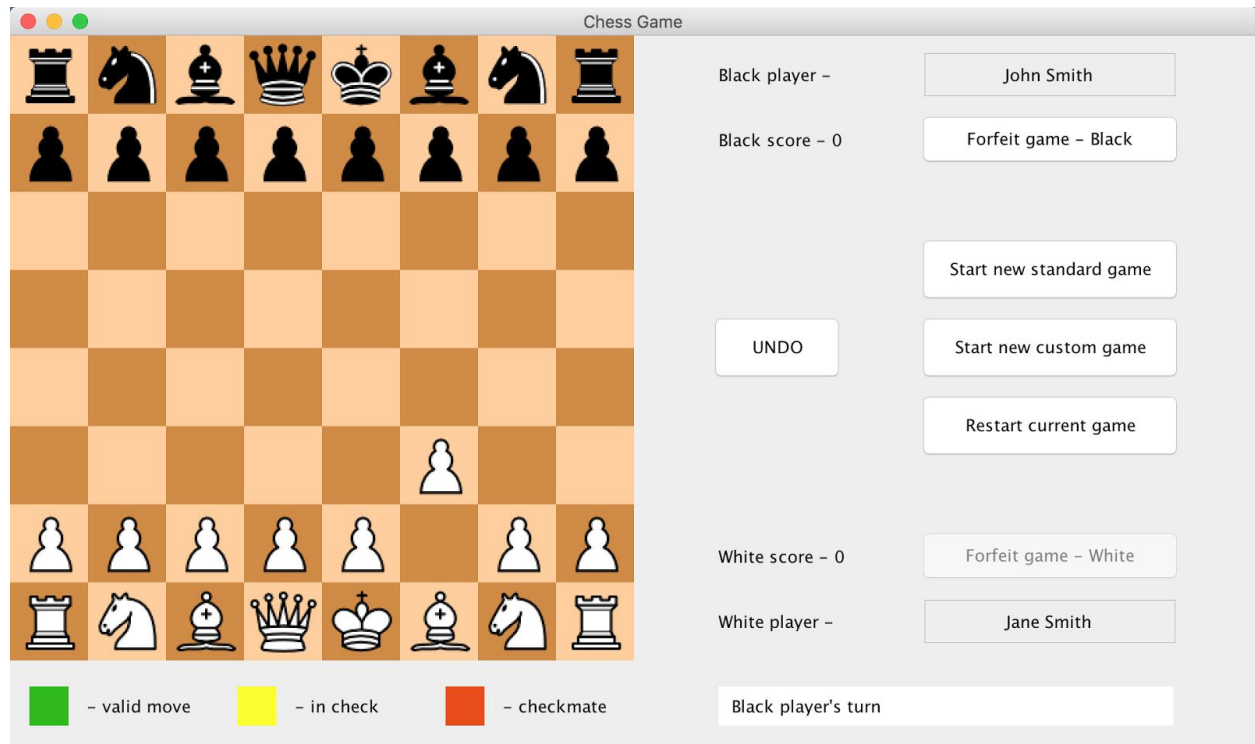
First note that the highlighted green squares are no longer highlighted. Then we notice that a white pawn has been successfully moved. Also note that the announcement box at the bottom right says that it is not a Black player's turn, and the "Forfeit game - White" button has been disabled and the "Forfeit game - Black" button has been enabled.

Test #6: Black moves a piece

Let's observe as a proof of concept that the black player can now move a piece since it's their turn.

Observe the following two states of the GUI as the black player moves a piece.

Test #7: Moving a piece to invalid square

Let's see what happens if we try to move a piece to square that isn't highlighted in green and make sure we see the expected behavior:


I tried to click on a square that isn't highlighted in green, and since that isn't allowed, a dialog box pops us saying "Illegal move! Try again". Observe the following state once I click the "OK" button:

Chess Game

Black player – John Smith

Black score – 0

Forfeit game – Black

Start new standard game

UNDO

Start new custom game

Restart current game

White score – 0

Forfeit game – White

White player – Jane Smith

■ – valid move   ■ – in check   ■ – checkmate

White player's turn

We see that the highlighted squares disappear, as expected. Now the player has to start over from the beginning by click a piece first to highlight valid squares, and only then can they move it.

Test #8: Moving other player's piece

Notice that it is still the white player's turn, since we didn't actually make a move yet. Now try clicking on a black chess piece to see what happens. Expected behaviour would be that nothing would change the state remains the same. We won't be able to move a piece that isn't our own. As the announcement box says it's the White player's turn. The same should apply if we just click on a square that has no piece at all - no behavior.
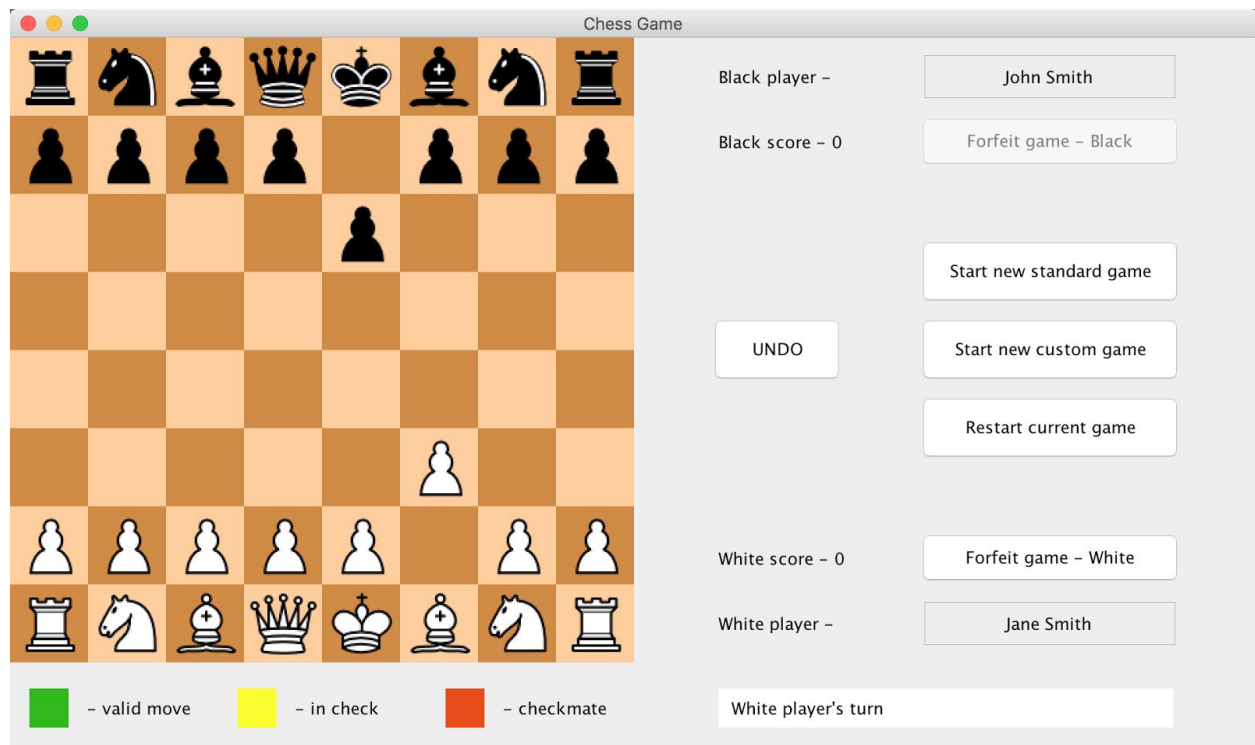
Note, it's still the white player's turn and nothing changes if we try to move a black chess piece.

Test #9: Black Forfeit button

Say it's the black player's turn, but they wish to forfeit the current game and click on the "Forfeit game - Black" button. The expected behaviour would be that the game is returned to it's original state, whether that be a standard game or a custom game. Also, a dialog box saying "Black forfeits game, Play again", as follows:

Now if you click the "OK" button you will be able to notice that the White player's score has incremented by 1, since the black player forfeited:

Also note that the application has returned to its original state.

Test #10: White Forfeit button

Observe the same behavior if the white player player forfeits the game by clicking the "Forfeit game - White" button, only the Black score will have incremented by 1:

Test #11: "Start new standard game" button

Clicking on the "Start new standard game" should set up the board as when the application is initially set up when it is first run. It should all pop up a dialog box that says "New standard game of Chess" as follows:

Once clicked "OK", you should be able to play the game. Note that the scores are still recorded from when the application is first run.

Test #12: "Start new custom game" button

Clicking on the "Start new custom game" should set up the board as follows with the custom pieces, Amazon and Coyote. It should all pop up a dialog box that says "New custom game of Chess" as follows:
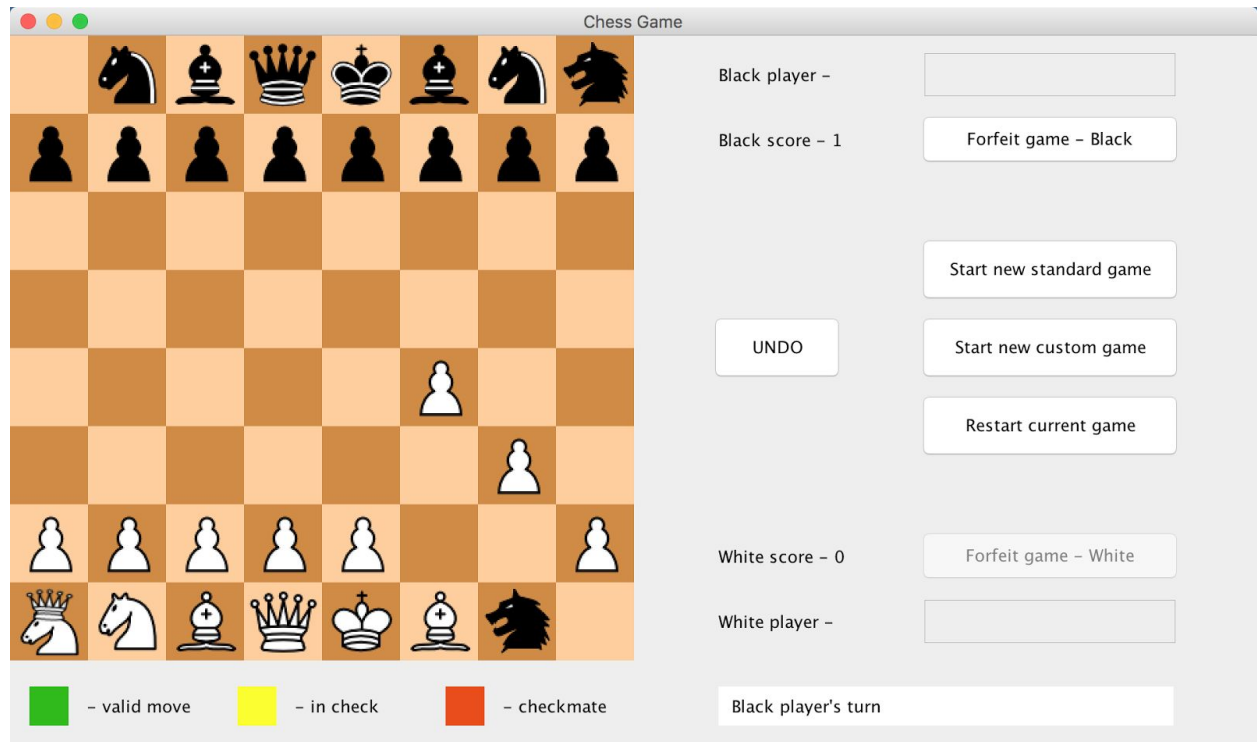
Once clicked "OK", you should be able to play the game with custom pieces. Note that the scores are still recorded from when the application is first run. As a side note, the custom game is pretty fun to play, and really boggles one's mind.

Test #13: "Restart current game" button

Say you are in the middle of a game, and both players agree to restart the game. You can click on the "Restart current game" and GUI will be restored to a new game setup. For example say I was in the middle of custom game of Chess, when both players decide to restart.

This would be the initial state of the GUI before the restart:

And once the "Restart current game" button has been clicked:

And you should be able to play the same game whether standard or custom after you click the "OK" button:

Test #14: "UNDO" button

The "UNDO" button on the GUI allows a player to undo a single move, and gives them a second chance to make a move. Say I was playing a game in the state as shown below:

Now although it's the Black player's turn, and they haven't made a move yet, I am able to undo my last move, by clicking the "UNDO" button, and my last move would be undone, as follows:

Also note that I will be reminded that I undid my last move with a dialog pop up that says: "Last move undone". And once I click "OK", I will be able to make my move again:

Test #15: "in check" highlighted square

Another test is make is to see if the square that the king is on is highlighted in yellow if he is in check. Here is an example game state, that when recreated should highlight the king's square in yellow:

Test #16: "checkmate" highlighted square

Similar to the previous test is to check if the square that the king is on is highlighted in red if he is checkmated. Here is an example game state, that when recreated should highlight the king's square in red:

Also note that the Black score has been incremented as a result of the checkmate.
The announcement box should say that "Black wins this game".
Just click on the "Start new standard game" or rerun the application to start a new game.