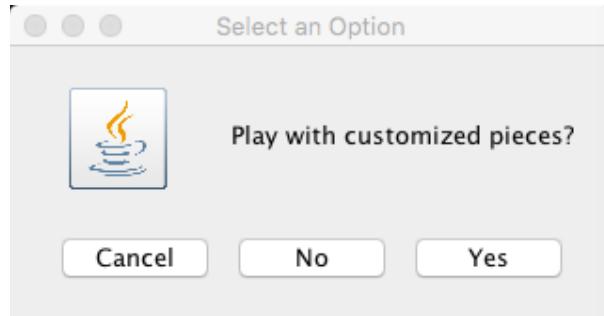


Chess Game GUI Manual Test Plan

zyi3

1. Static GUI

When start the game, player can choose from classical and customized mode

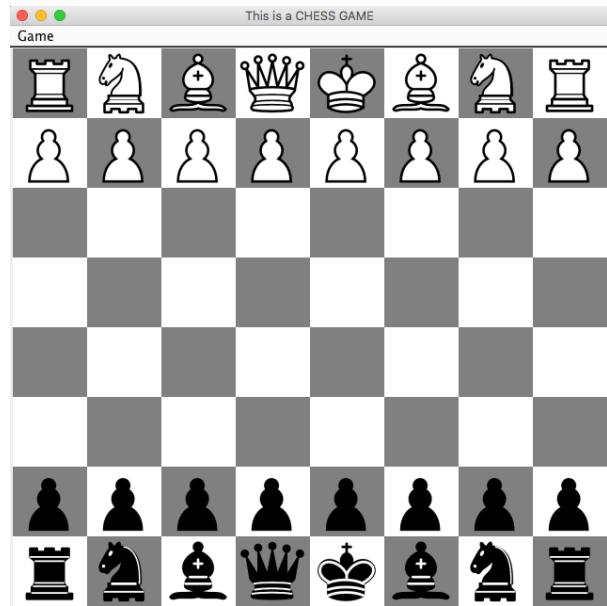


1.1 Mode selection

- Choose Yes enters classical mode; choose No or Cancel enters customized mode



1.2 Customized mode



1.3 Classical mode

2. Pieces Test

In this section, a selected piece is highlighted with background color BLUE, and its valid moves are highlighted with background color GREEN in the GUI. Any illegal move will pop a warning message and the move will be ignored. Players have to make a legal move to end his turn.



2.0.1 Highlights



2.0.2 Illegal moves



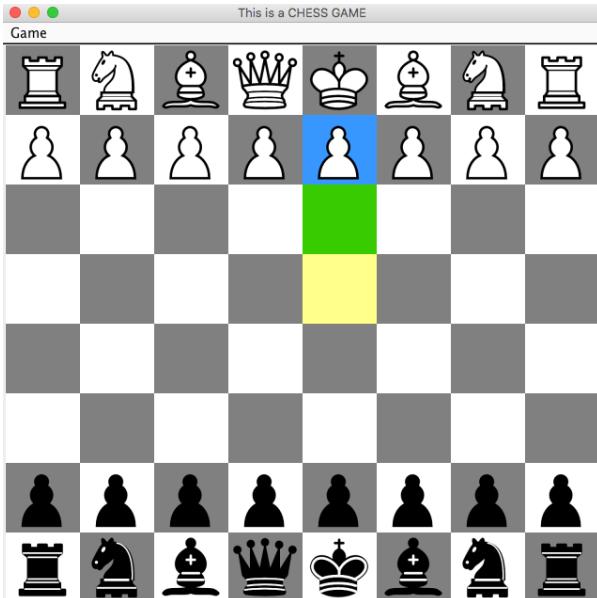
2.0.3 White capture Black



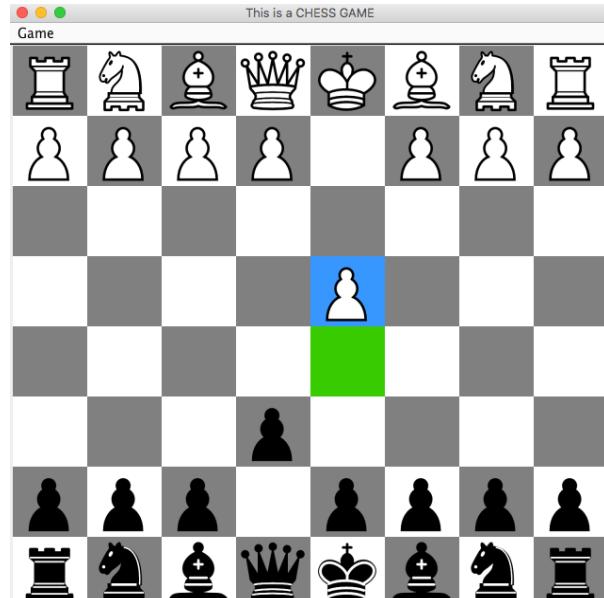
2.0.4 Black capture White

2.1 Pawn Test

- Basic moves



2.1.1 Pawn first move

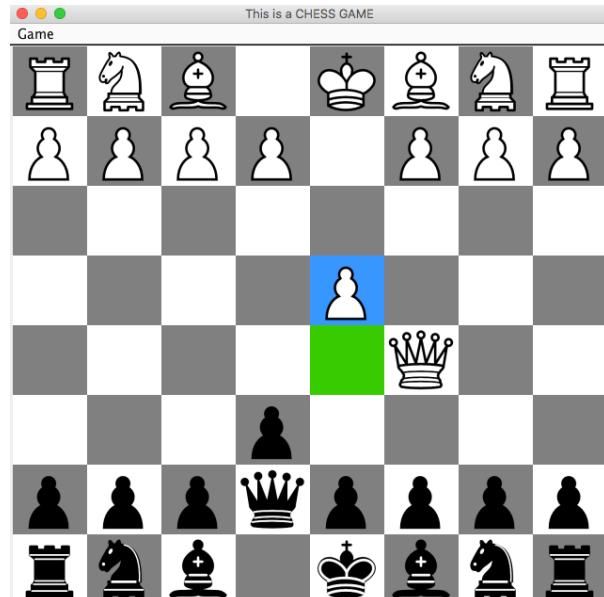


2.1.2 Pawn regular move

- Capture enemy & Cannot capture ally

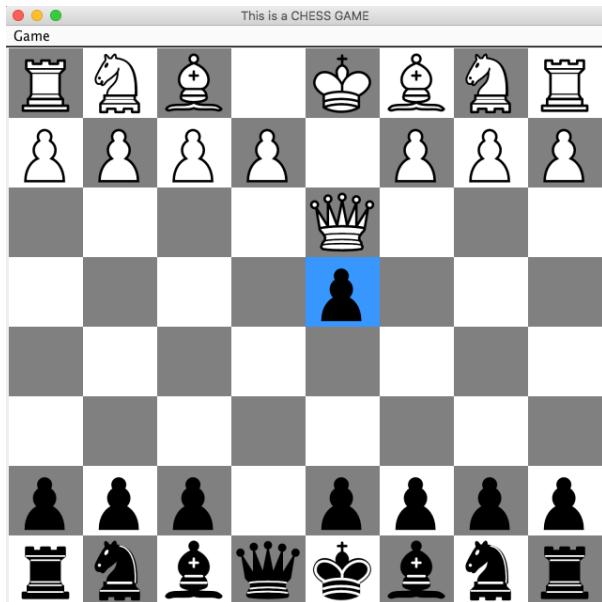


2.1.3 Pawn capture enemy



2.1.4 Pawn cannot capture ally

- Blocked by enemy & Blocked by ally



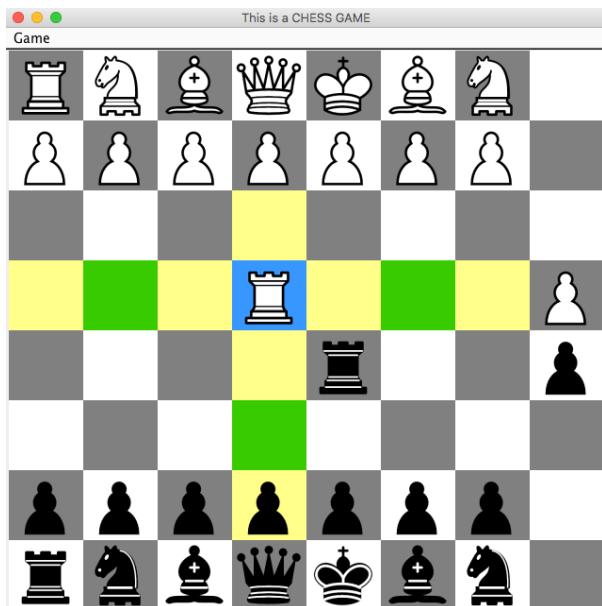
2.1.5 Pawn blocked by enemy



2.1.3 Pawn blocked by ally

2.2 Rook Test

- Compact test

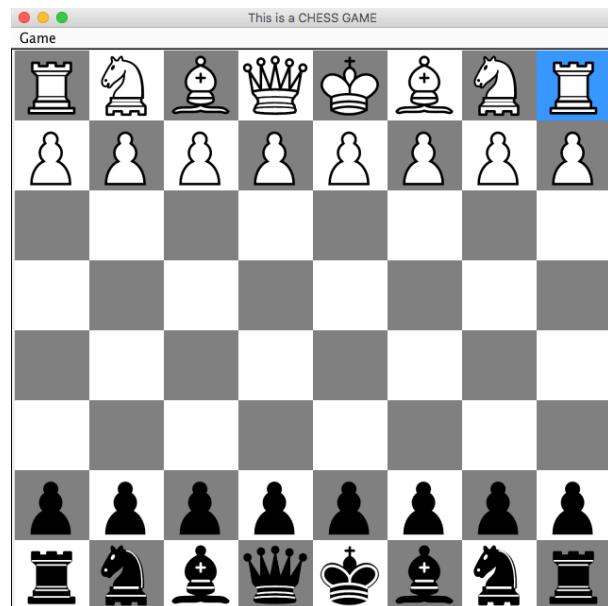


2.2.1 Rook non-diagonal moves

Rook cannot capture ally (white pawn on right)

Rook can capture enemy (black pawn at bottom)

Rook cannot capture enemy behind piece (black queen)



2.2.2 Rook blocked by ally

2.3 Knight Test

- Basic moves



2.3.1 Knight initial moves



2.3.2 Knight 8 moves

- Capture enemy & Cannot capture ally



2.3.3 Knight capture enemy(white pawns)



2.3.4 Knight cannot capture ally(white pawns)

2.4 Bishop Test

- Compact test

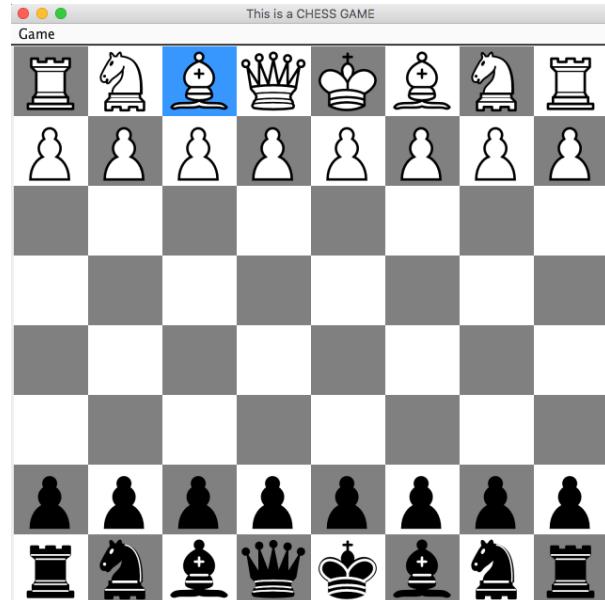


2.4.1 Bishop diagonal moves

Rook cannot capture ally (white pawn up right)

Rook can capture enemy (black pawn down left)

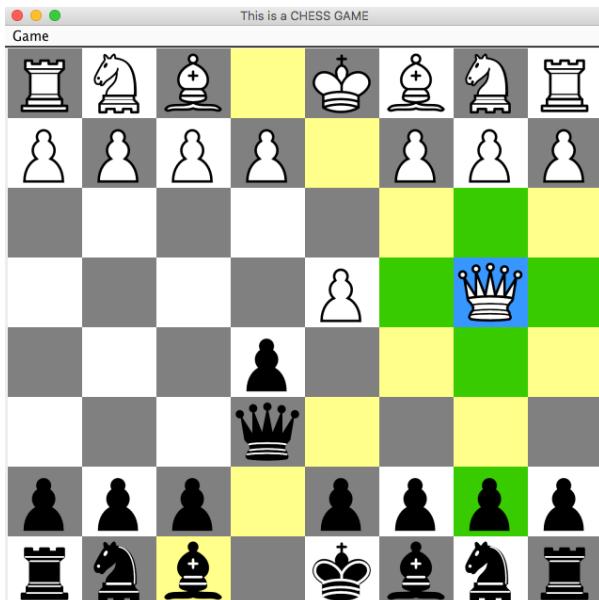
Rook cannot capture enemy behind piece (black knight)



2.4.2 Bishop blocked by ally

2.5 Queen Test

- Compact test

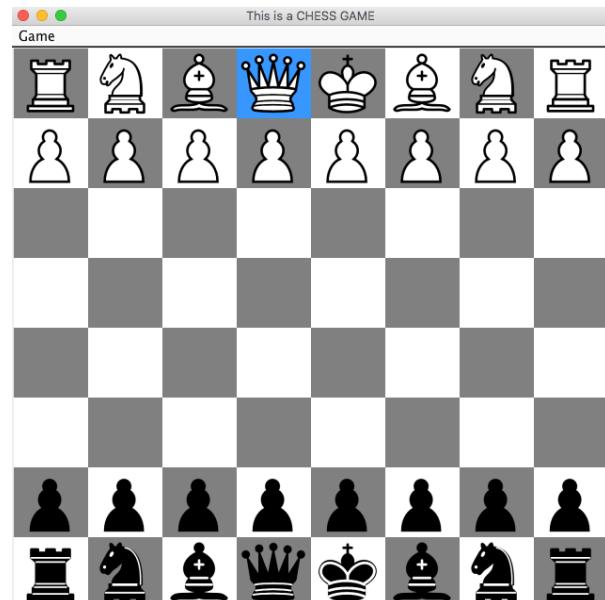


2.5.1 Queen diagonal and non-diagonal moves

Queen cannot capture ally (white pawns)

Rook can capture enemy (black pawn and black bishop)

Rook cannot capture enemy behind piece (black knight)



2.5.2 Queen blocked by ally

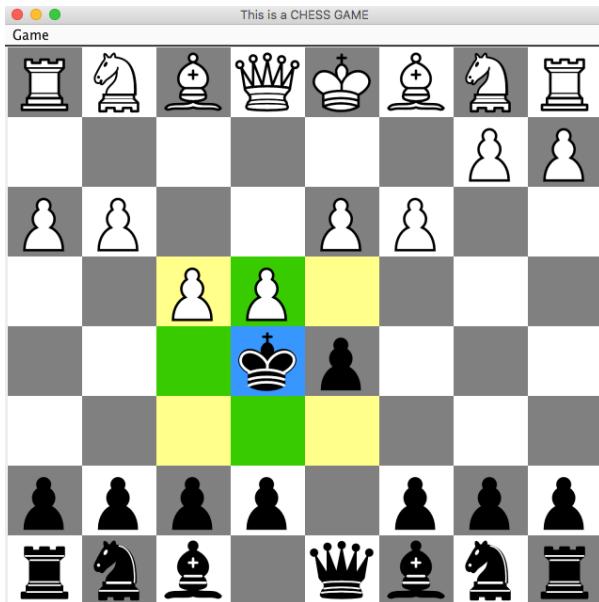
2.6 King Test

- Basic moves



2.6.1 King 8 moves

- Capture enemy & Cannot capture(blocked by) ally



2.6.2 King capture enemy(white pawns)

King cannot capture(blocked by) ally(black pawn on right)

2.7 Cannon Test

- Compact Test



2.7.1 Cannon non-diagonal moves

Cannon cannot capture ally(white queen)

Cannon can capture enemy(black guard)

Cannon cannot capture enemy behind piece(black queen)

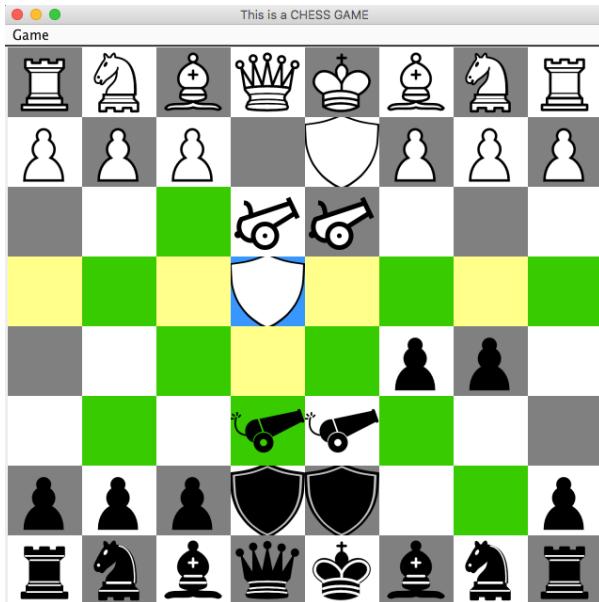
Cannon cannot capture w/o stepping stone(black cannon)



2.7.2 Cannon blocked by ally(white guard)

2.8 Guard Test

- Compact Test



2.8.1 Guard queen-like moves

Guard cannot capture ally(white cannons)

Guard can capture enemy in range(black cannon)

Guard can't capture enemy out of range(black rook, pawn)

Guard can't capture enemy behind piece(black guard)

Guard blocked by ally(white cannon)

3. Game Conditions Test

This section tests game conditions including CHECK, CHECKMATE and STALEMATE.

3.1 Check

- Setup. Black's turn to move



3.1.1 CHECK setup

- Move black bishop and white is in check



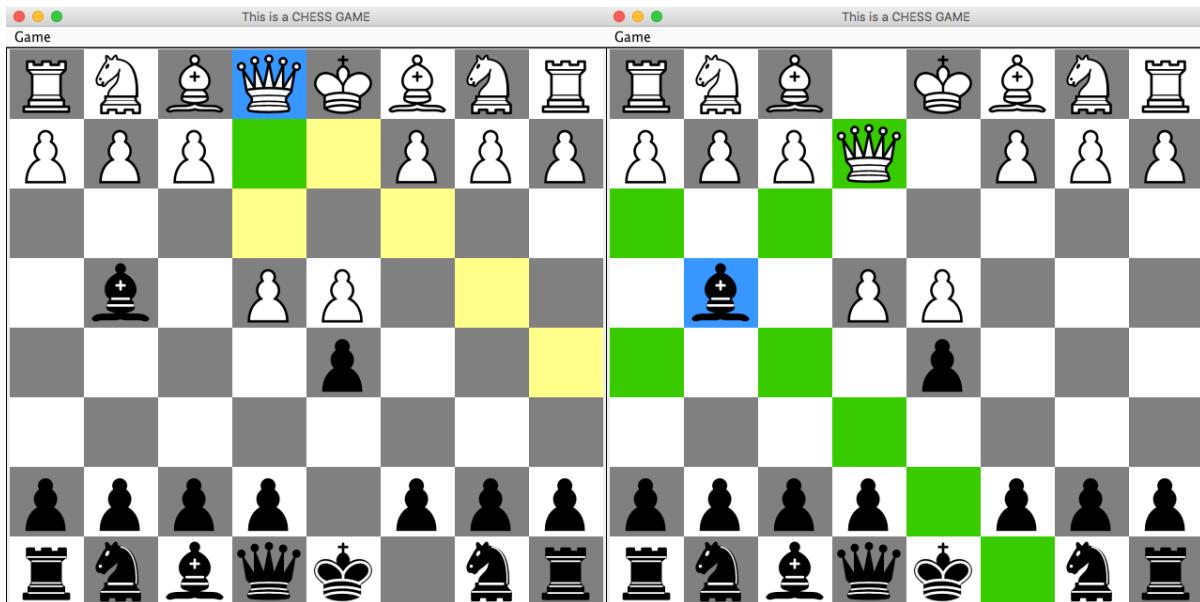
3.1.2 player in check

- Attempt to move white king in the black tile will not remove check, thus it is illegal



3.1.3 Move fails to remove check

- Move white queen to block black bishop to remove check



3.1.3 Move successfully remove check

3.2 Checkmate

- Setup. White's turn to move



3.2.1 CHECKMATE setup

- White queen captures black bishop. Black is in checkmate

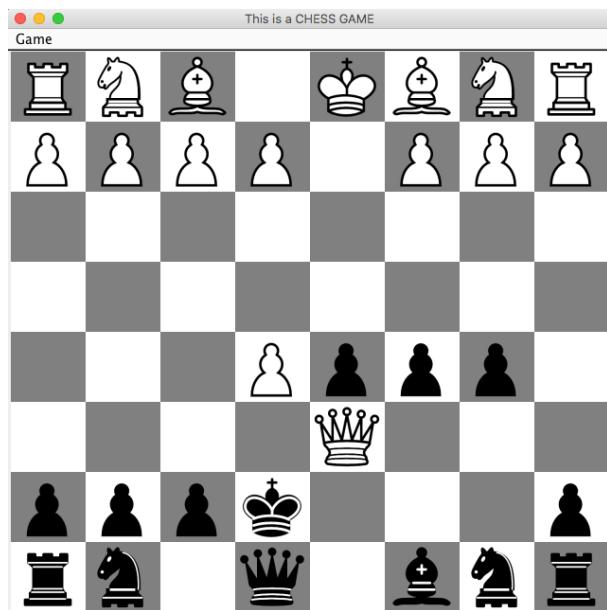


3.2.2 Check then checkmate

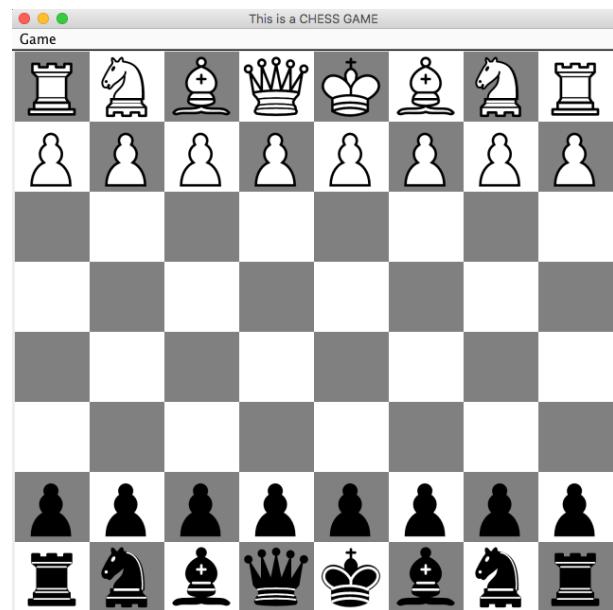
- Current game ends. Show scores. Query players if start a new game w/ or w/o customized pieces. Choose No to stay but players cannot make any move



3.2.3 After checkmate



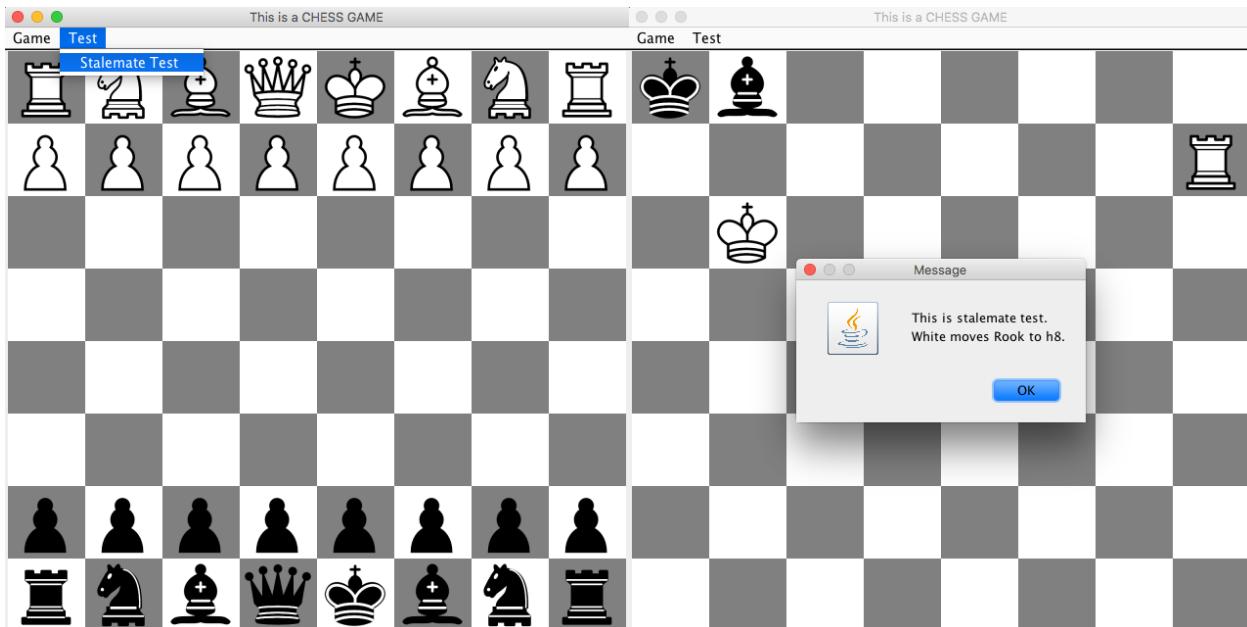
3.2.4 Do not start a new game



3.2.5 Start a new game

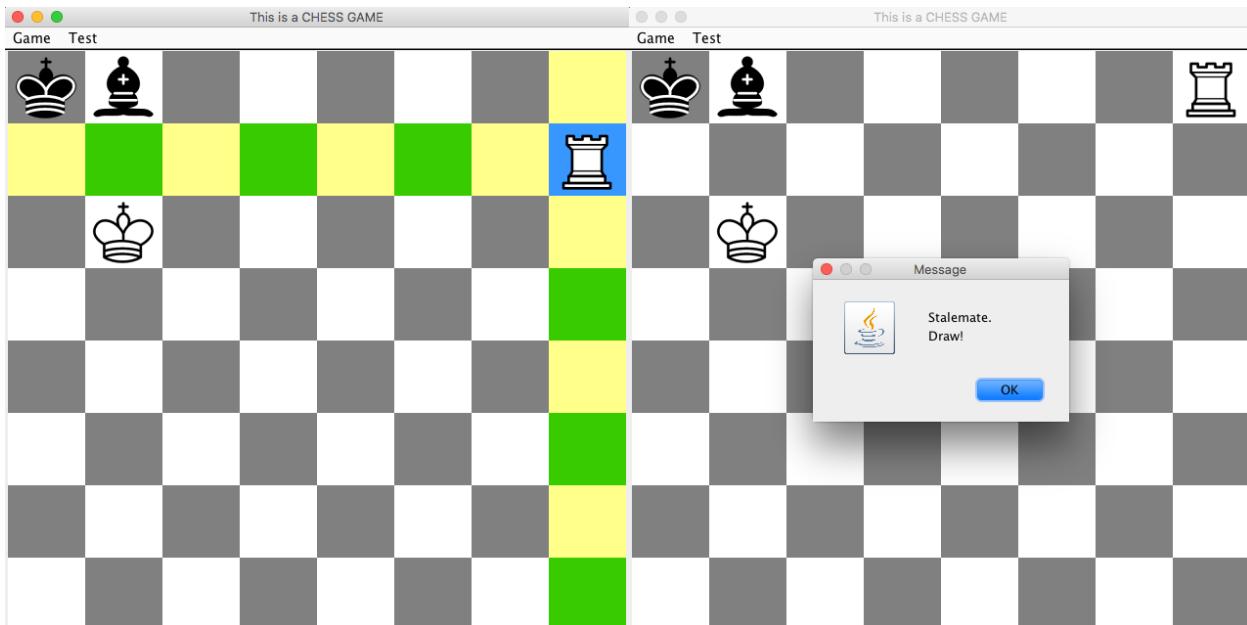
3.3 Stalemate

- Setup. Click “Test” in menubar and select “Stalemate Test”. Then confirm the message by clicking OK.



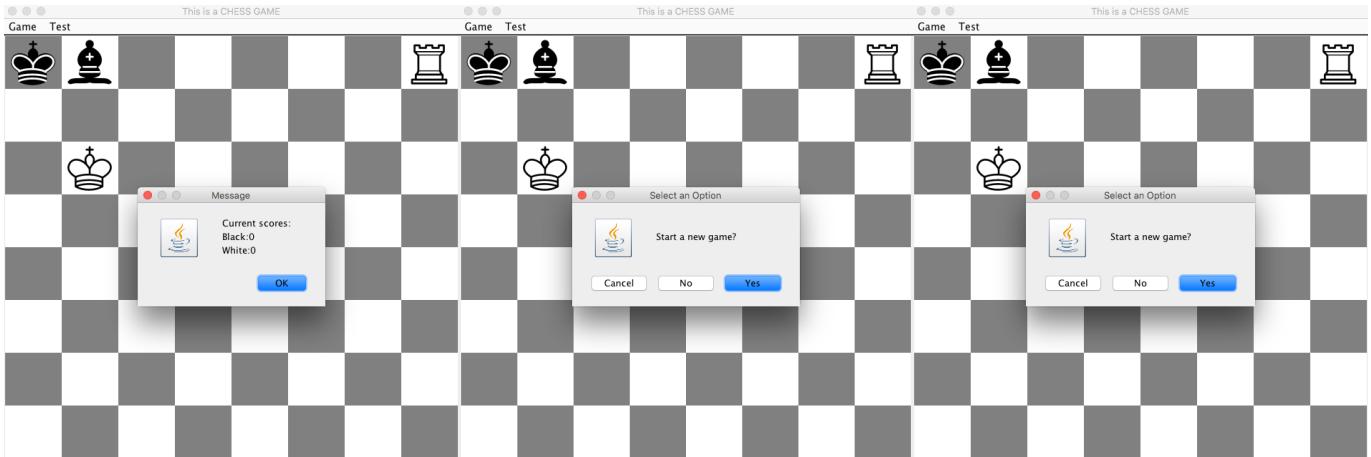
3.3.1 Enter stalemate test scenario

- Move white rook up. Stalemate! Scores will not change when drawing.



3.3.2 Stalemate

- Then condition similar to checkmate



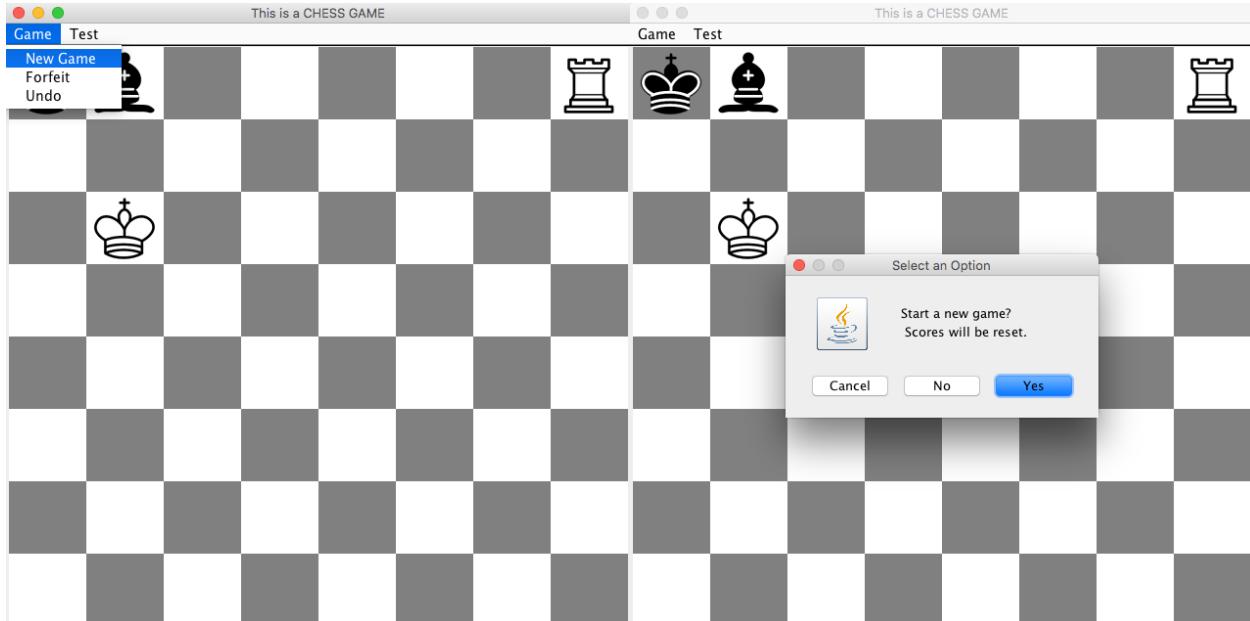
3.3.3 After stalemate

4. Menu Test

This section will test the functions in menu bar.

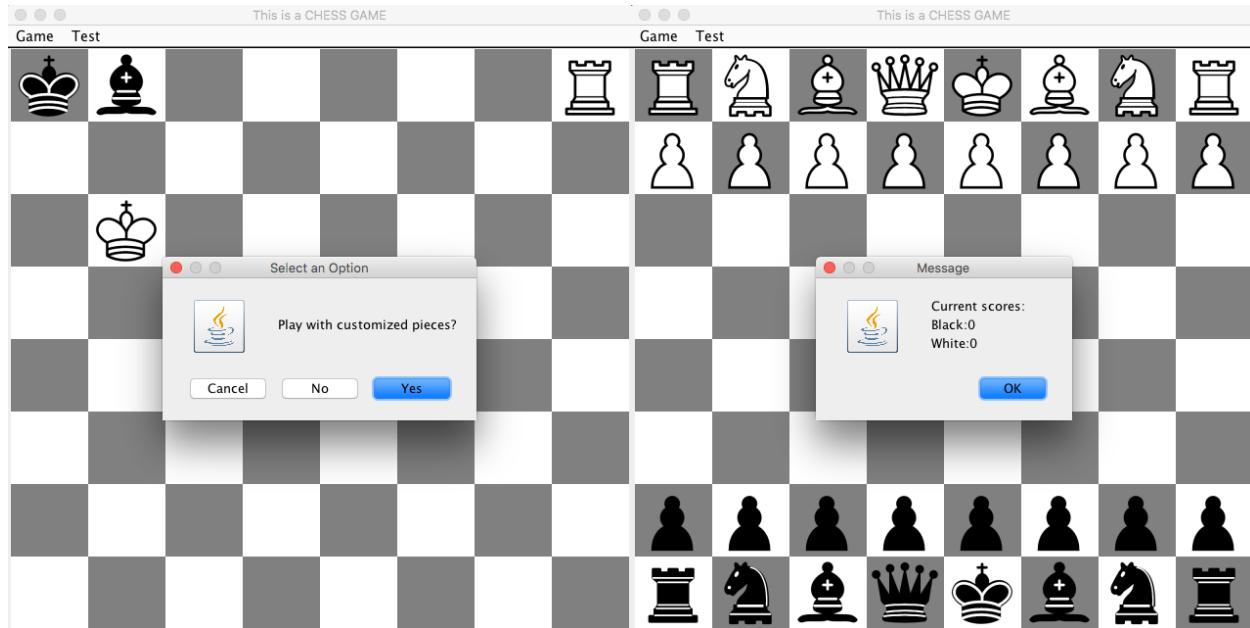
4.1 New Game

- Continue with choosing not to start a new game after stalemate(or checkmate)
- Click “Game” in menu bar and select “New Game”. Note that scores will be reset.



4.1.1 Start a new game

- New game setup



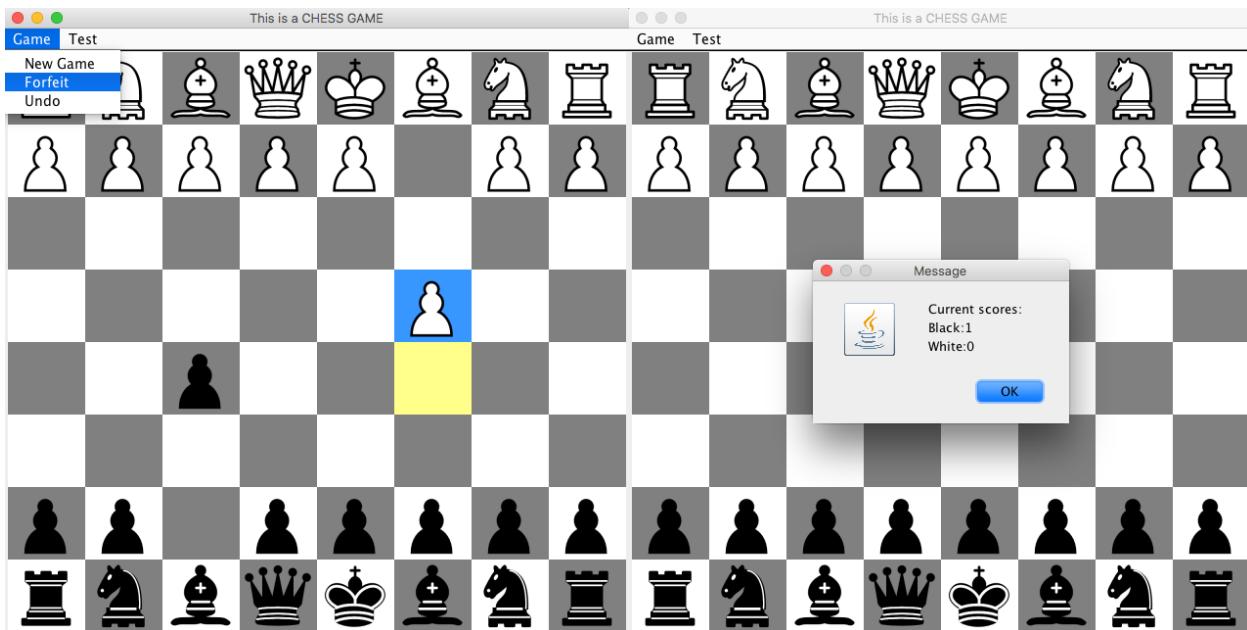
4.1.2 New game setup

4.2 Forfeit

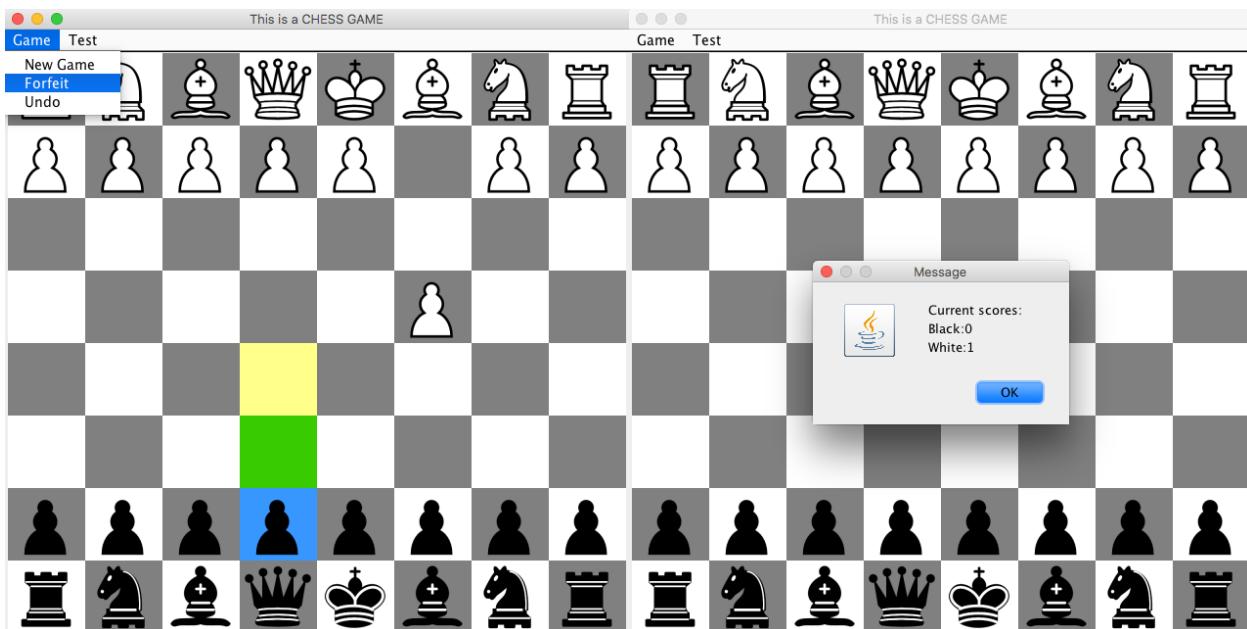
- Click “Game” in menu bar and select “Forfeit”. Note that a player can only forfeit at the beginning of his turn.



4.2.1 Forfeit



4.2.2 White forfeits; black gains point



4.2.2 Black forfeits; white gains point

4.3 Undo

- After moving a piece, click “Game” in menu bar and select “Undo”. Note that a player can only undo before opponent’s move.

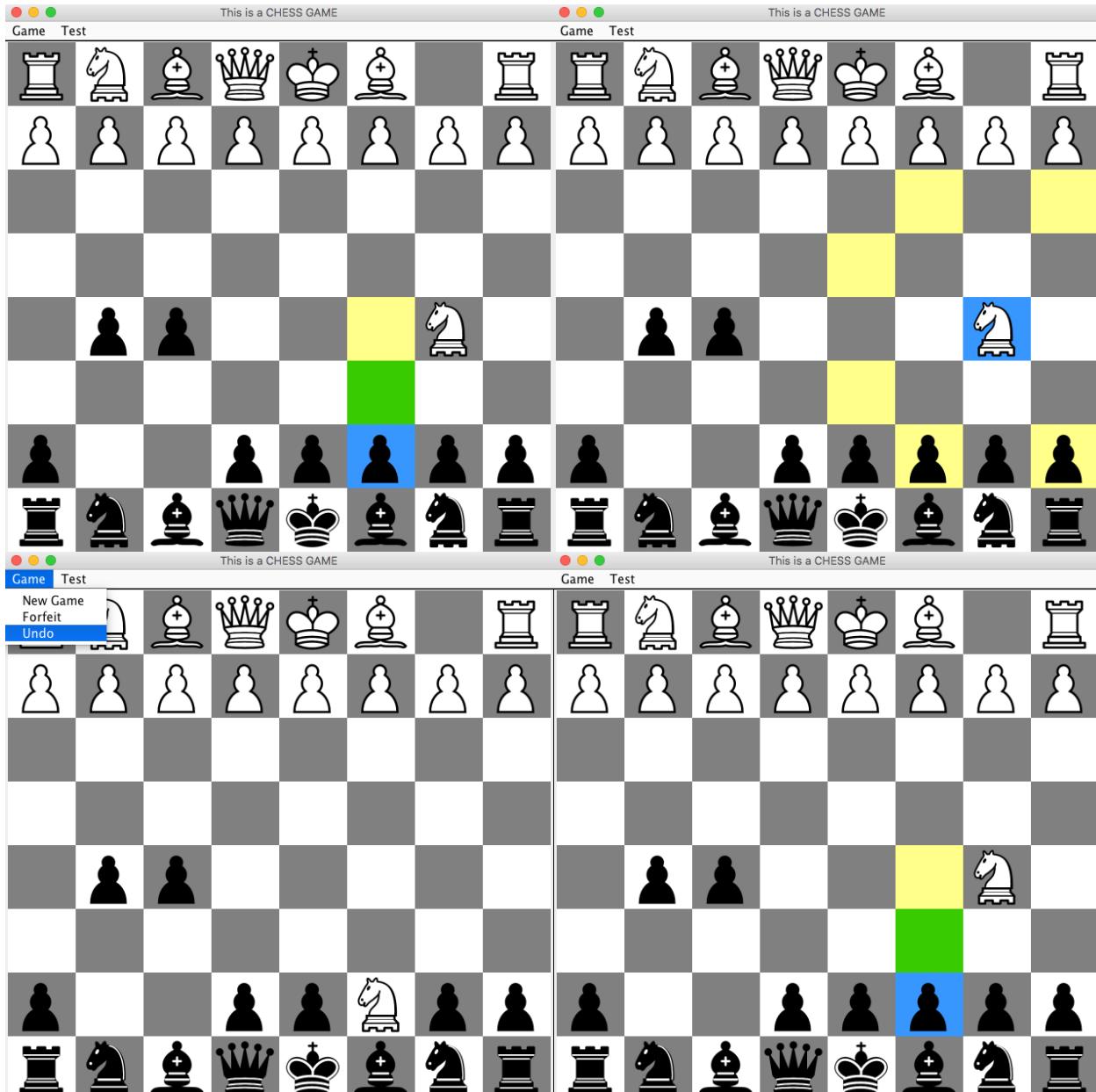


4.3.1 Undo w/o capture



4.3.2 Undo w/ capture

- Also note that pawn's undo is different. Have to recover a pawn's firstMove status as well.



4.3.3 Pawn's undo (1)
Pawn who can move 2 tiles can still move 2 tiles after undo



4.3.4 Pawn's undo (2)
 Pawn who can't move 2 tiles can't still move 2 tiles after undo

5. Game Loop Test

- Try to move two pieces with same color in succession



5.1.1 Turn mechanism

