Correct initial board setup
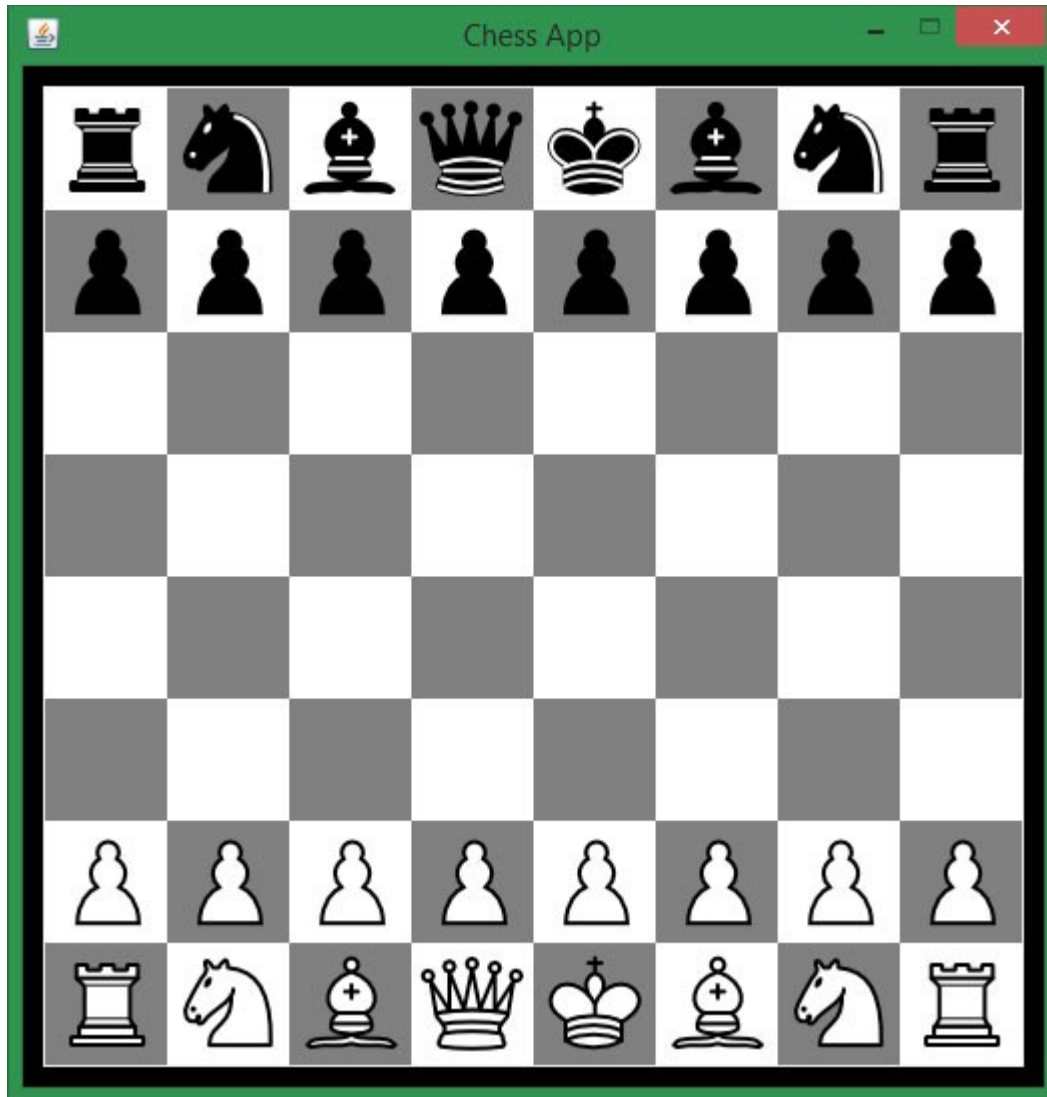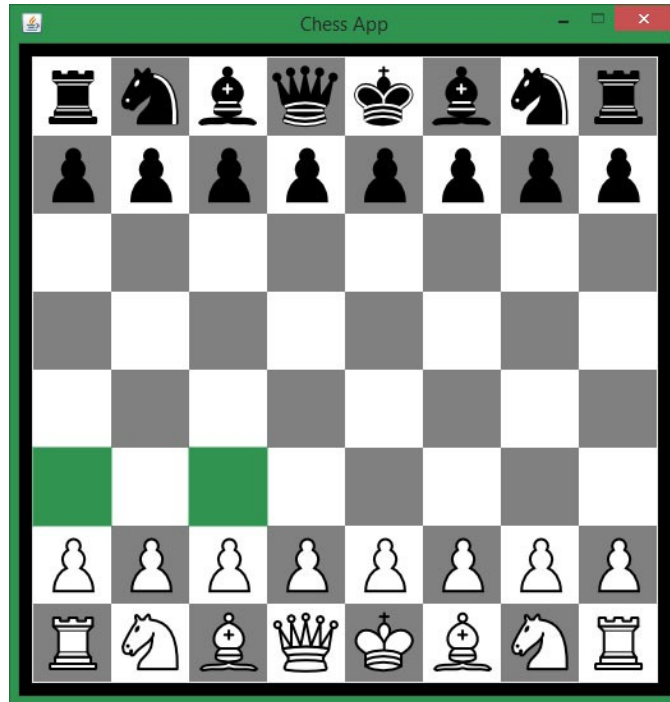
1. Load the program to start a new game.
2. Verify that the board setup matches the correct setup per standard Chess rules.

Legal moves highlighted after clicking on a piece that matches turn color

1. Load program to start a new game.
2. Click on a black piece. Nothing should light up.
3. Now click on a white piece. Legal spaces to move to should be highlighted.
   a. Note only pawns or knights can move in the beginning since all other pieces are obstructed.
4. Click on any non-highlighted square. Any lit up squares should revert to their original color.


Knight moves
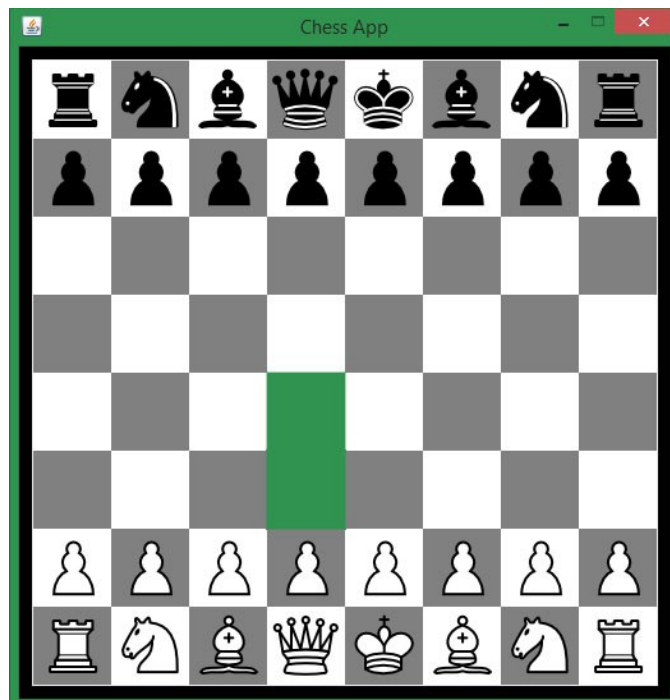
Pawn moves

Turn switches after making a legal move

1. Load program to start a new game.
2. Select a white piece and move it.
3. Click on every white piece. Nothing should light up no matter what you click.
4. Click on a black piece. If it has legal moves, squares should light up.
5. Select and move a black piece.
6. Now click on every black piece. Again, nothing should light up.
7. Repeat from step 2 for two or more cycles.
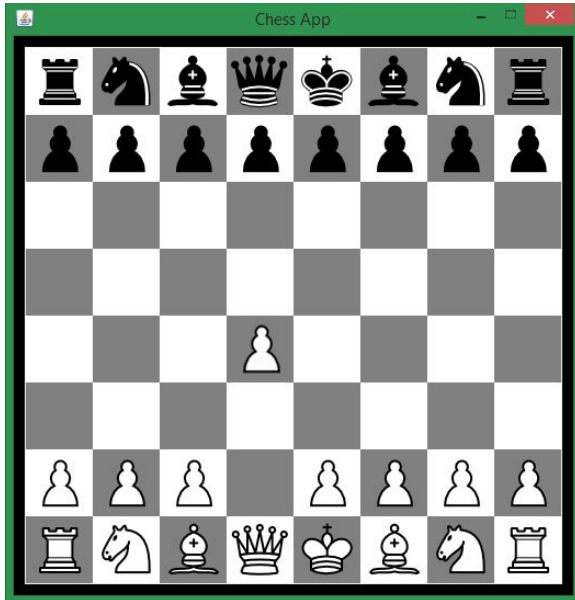
White cannot move twice in the same turn.

Once black makes a move, it's white's turn again.

Each column is labeled by a letter from A to H, from left to right. Each row is labeled by a number from 1 to 8 from bottom to top. For example the bottom-left square is A1, the bottom-right is H1, top-left is A8, and top-right is H8.

Using this notation for squares, the following tests will use the following notation for a move:

[Square of a piece, Square of its destination]

For example [C2, C4] would move the piece at C2 to the square C4. If starting from the initial configuration, this would move a white pawn forward two spaces.

When initiating a move, first click on the square of the piece. Before clicking on the destination square, confirm that the destination square is included in the highlighted squares. After confirming, click on the destination square.

Testing capture

1. Load the program to start a new game.
2. Perform the following sequence of moves:
   a. [D2, D4]
   b. [E7, E5]
   c. [D4, E5]
3. Confirm that the white pawn successful captures the black pawn.
4. Continue with following sequence of moves
   a. [A7, A5]
   b. [E5, E6]
5. Confirm that the white pawn moves up and nothing is left behind in E5.

Testing check

6. Load the program to start a new game.
7. Perform the following sequence of moves:
   a. [D2, D4]
   b. [E7, E5]
   c. [D4, E5]
   d. [A7, A5]
   e. [D1, D7]
8. After the last move, the black player will be alerted that it is in check.
9. At this point, the only black pieces that should have moves are the left-most knight, left-most bishop, the queen, and the king.
   a. Click on each of these pieces. Confirm that legal moves are lit up for each of these pieces. All of them should only be able to capture white queen.
   b. Click on any other piece. Confirm that no other black piece has legal moves. No white piece should be able to move either.
10. Capture the white king. An alert should appear stating that black has escaped check.

Testing checkmate

1. Load the program to start a new game.
2. Perform the following sequence of moves:
   a. [F2, F3]
   b. [E7, E5]
   c. [G2, G4]
   d. [D8, H4]
3. After the last move, the game should announce that white has been checkmated.