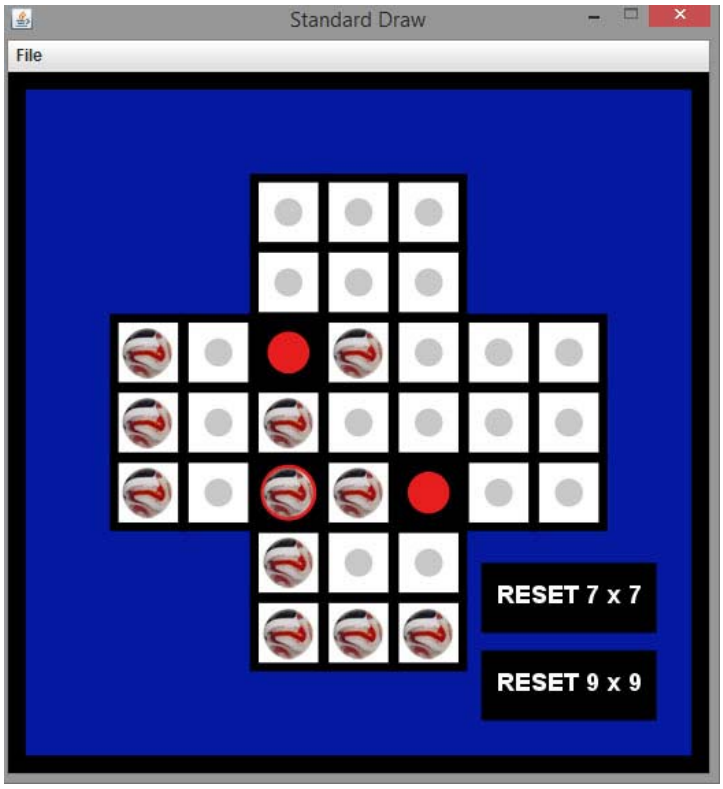
Marbles.java



Background:

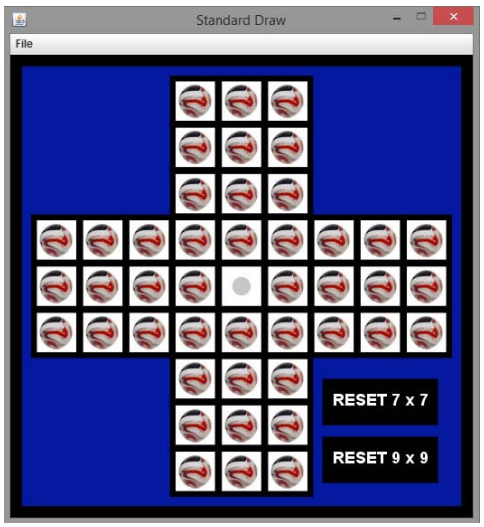
We've been practicing with 2-dimensional arrays, and have looked at a Knight's Tour and Conway's Game of Life. It's time to create a game that will use a Graphical User Interface (GUI), along with a 2D array. The name of our game is **Marbles**.

Assignment:

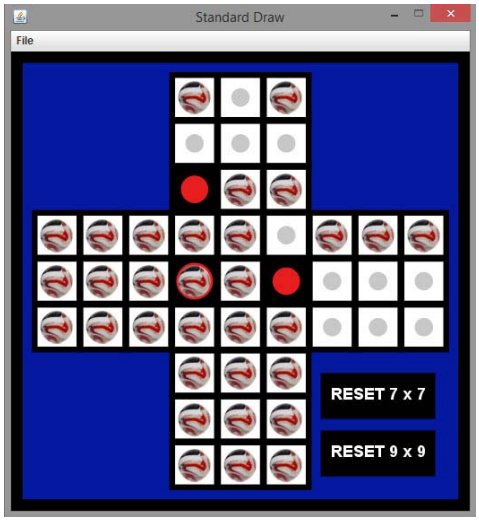
1. Write the game of **Marbles**. Start with the code on my website. Your game should obey the following rules:
   (a) The player should be allowed to press the mouse anywhere on the surface of the GUI. If the user presses on a marble, that marble should become highlighted, indicating it is now the active marble in the game. If any moves are possible from this active marble, the empty cell(s) that is/are the possible destination(s) of the active marble should also be highlighted (see image above).
   (b) Once the player has chosen an active marble with a possible move, the player should then be able to press the destination cell. The active marble should then jump (and remove) the adjacent marble in its move to the destination cell. After it moves, no marble should be highlighted.
   (c) At any time in the play of the game, the player should be allowed to press on a reset button, starting the game over for the 7 x 7 or 9 x 9 case.
   (d) If there are no moves left for the player to make, and more than one marble exists on the board, then the game has been lost, and a "Lose Message" should be printed. If only one marble remains on the board, the game has been won, and a "Win Message" should be printed.
2. Comment the **Marbles** class thoroughly.

See the following pages for sample screen shots of the game being played.

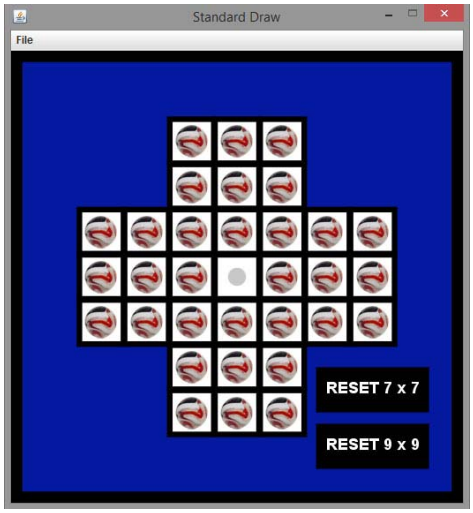
Initial screen, or after pressing on "Reset 9 x 9":



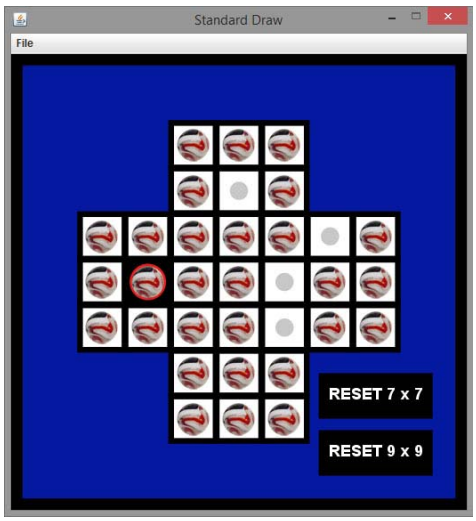
After several initial steps:



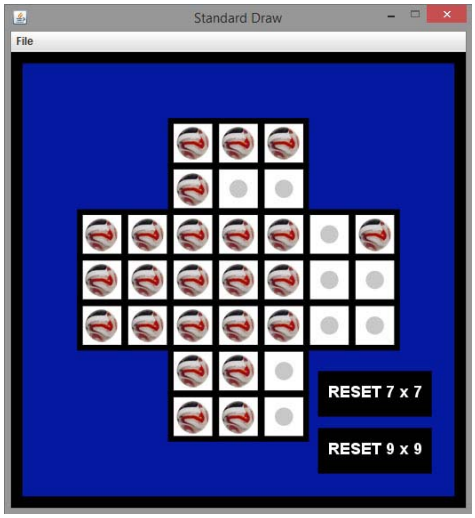
After pressing on "Reset 7 x 7":



After pressing on a marble that has no possible moves:



After a move, or after pressing on an empty space:



When the game is lost: