Minor Assignment 4

Drawing A Checkerboard

Instructions: Create a new project in Eclipse, download the outline of the DrawCheckerboard.java file from Canvas, and import it into your project. Put a comment with your name at the top. This indicates that the work is yours alone, as stated in the Collaboration and Academic Dishonesty page.

Fill in the methods appropriately, test your code, and submit the completed .java file to Canvas by the due date.

Please refer to the "Getting Help" and "Academic Dishonesty" portions of the syllabus for direction on how to get help. You are always welcome to message your instructor. Make use of this if you are stuck!

Background: You are going to use Java to draw a basic checker board. A standard checker board is composed of 8 rows of 8 squares each. In each row, the squares alternate between two colors, light and dark. Adjacent rows do not have same colored squares sharing a side. So, if one row goes light, dark, light, etc. The row below it goes dark, light, dark, etc. Each player gets 12 circular pieces. These are arranged on the dark squares on their side.

The Problem: Download the DrawCheckerBoard.java file from Canvas. You will only be modifying the `drawCheckerBoard` method. Do not change the `main` method. Accomplish the following tasks using looping. **This is a suggested order, but any way that you draw the correct checkerboard is fine.**

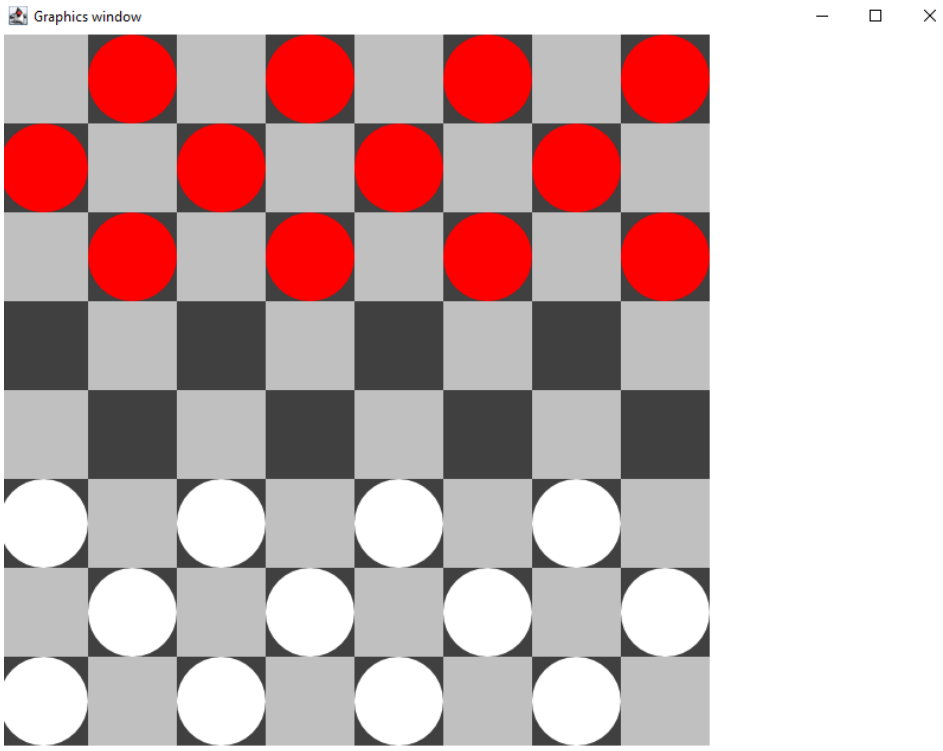
- Change the color to dark gray with `g.setColor(Color.darkGray).` Fill in the entire game board with a rectangle with `g.fillRect(0, 0, width, height).`

- Change the color to `lightGray.` Use an appropriate loop(s) to fill in a playing square (you'll need to calculate the size of each square. Remember, each row has 8 squares) as light gray. The first square of the top row should be light gray. Then the third one should be. Then the 7th one. The pattern would be the same for the 3rd row, 5th row, and 7th row. The pattern for the 2nd, 4th, 6th, and 8th rows should be dark gray, light gray, dark gray, etc.

- Change the color to `red.` In the top 3 rows (rows 1, 2, 3), draw a filled red circle with `g.fillOval` in each of the dark squares.

- Change the color to `white.` In each of the bottom 3 rows (rows 6, 7, 8), draw a filled white circle in each of the dark squares.

Your completed checkerboard should look like:



Tips: There are several ways to accomplish these tasks.

You should probably use a nested **for** loop to draw the boxes. You can do fancy stuff with % to get the alternating pattern, or just use one inner loop for rows 1, 3, 5, 7, and another inner loop for rows 2, 4, 6, 8.

For the checkers, you could use a single for loop to draw each row, and just copy/paste it six times.

Or you could use a nested **for** loop where you check which row you're on with an **if** statement, and set the color (`red`, `darkGray`, or `white`) accordingly. Or any other strategy that works.