## **CS111 Project Milestone 4**

## **Fall 2013 (10 points)**

## **Due: Dec 9, 2013 @ 5pm**

With special thanks to Stephen Davies @ the University of Mary Washington

This is the last milestone. You have 1 week to complete it. You should submit your work in a file called ms4.txt.

You are to perform efficiency analysis on your play() and callColor() algorithms during the course of 1 round (e.g. one call to your play() method) . You must provide clear explanations as to how you arrived at your answers. Your analyses should follow the following template:

1. Identify your input sizes, and assign each to a variable name. What properties of the game govern how fast or slow your algorithm runs?
2. Identify the operations you wish to count. Remember, good candidates for these operations are computationally expensive operations and/or operations that occur with greater frequency than others.
3. Determine the best case and worst case behaviors. Describe the scenario for each.
4. Compute f(n) for both best case and worst case scenarios relating the number of operations to the input size(s) identified in (1) and (2).
5. Come up with a “big Oh” for each of your algorithms

Remember, if you have written other methods that you call, you should include those in your efficiency analysis as well. You may do each method separately, and come up with a final big Oh by adding the contributing parts.