COMP 3160 – Fall 2014
Homework 5: Working with GUIs

Number of People: Individual. Feel free to ask me for help, or visit the Computer Science Learning Center (www.cs.memphis.edu/cslc).

Due: Thurs., Oct. 30 by 1:00 pm

Submission: Zip all of your Java source files (you can zip the entire project folder if using an IDE) into a single file and upload it to the proper folder in the eCourseware dropbox at https://elearn.memphis.edu. The non-coding portions can be submitted within your zip file, or as a hard copy at the beginning of class.

Coding Style: Use consistent indentation. Use standard Java naming conventions for **variableAndMethodNames**, **ClassNames**, **CONSTANT_NAMES**. Include a reasonable amount of comments.

Grader: TA, Kyle Cherry (kcherry2@memphis.edu). Questions about grading? Please contact him first!

Add the following features to the simple paint program that we developed in class (code posted on Oct. 21):

1. **(5 pts)** Change the default "pixel" color to white, and add a "Clear" button that allows the user to reset all of the pixels in the application to white.

2. **(20 pts)** The current version of the program supports only three colors, which is not very conducive to artistic pursuits (like sloth drawings)! Implement a New and Improved™ color picker. This should consist of the following items:

    a. Three text fields that allow the user to specify red, green, and blue (RGB) values from 0-255. Also include error checking on these fields – your application should display an appropriate error message if the user tries to enter anything besides an integer in [0, 255].

    (You can also implement these text fields as sliders, drop-down lists, or something similar if you prefer. Just be sure that the user can enter values for the three colors, and cannot enter invalid input.)

    b. A "preview" panel that shows the currently selected color (as an actual color, not just numbers!)

    c. The 6-digit hexadecimal color code of the currently selected color.

    You may want to consult the **Color** and **JTextField** classes in the Java API for some useful methods! See http://www.mathsisfun.com/hexadecimal-decimal-colors.html if you're not familiar with RGB color representation.