The goal of this assignment is to gain exposure to Java Swing and to build a user interface with a mix of standard and custom widgets. This project will involve creating a simple interactive paint application.

1. [10] Open Eclipse and create a new project (File -> New -> Project -> Java -> Java Project) named “Assignment4” (keep all other default settings). Add a class which extends JPanel to your project.

2. [10] Add your JPanel to a JFrame and display the frame.

3. [10] Add at least four (4) buttons to your frame which will allow the user to select a paint color.

4. [10] Add at least three (3) buttons to your frame which will allow the user to select a brush size.

5. [10] Add a clear button to your frame which, when clicked, immediately clears anything that has been drawn to your JPanel class.

6. [30] Add a MouseMotionAdapter to your JPanel class so that mouse drags can be recorded. Create a PaintPoint class to store the mouse location of a mouse drag event along with the current draw color and the current brush size so that these parameters can be used to draw a point with the correct location, color, and brush size. Unlike the example from the book, your solution should not impose an arbitrary limit to the number of points that can be drawn (hint: use a data structure other than an array to store instances of your PaintPoint class).

7. [20] When the JPanel is redrawn, draw all points which have been collected from mouse-dragged events.

Zip the Assignment4 folder in your Eclipse workspace directory and upload the .zip file to Blackboard (see Assignment 4 assignment in the Course Documents area).