Lab 7 100pts

This lab corresponds to the second half of Chapter 15 (Part A), as well as to Chapter 16 (Part B).

**Part A – Mouse and Keyboard Events (50 pts)**

(25pts) **yourlastname\_lab7a1.java**: Please create a program that allows users to create and remove points in a pane via mouse clicks. Use small circles to represent points. Left-clicking should add a point, right-clicking within some particular circle (or on its edge) should remove that point.

(25pts) **yourlastname\_lab7a2.java**: Please create a program that allows the user to draw lines using arrow keys. Let the drawing start in the center of a pane. Arrow key presses extend the line in the appropriate direction (left, right, up, down). The “amount” of key pressing should correspond to how much is being drawn. In other words, the application should extend the line farther when the user presses the arrow key.

**Part B – Advanced GUI Design (50pts)**

(25pts) **yourlastname\_lab7b1.java**: Please create a program that includes the following components and capabilities:

* A color display field (can be a text string or a geometric figure, but needs to be an element to which color is applicable).
* Four scroll bars or sliders (your choice): Red, Green, Blue, Opacity.
* User should be able to manipulate the look of the display field via these GUI elements.
* Numeric values corresponding to current slider/scroll bar state should be displayed next to each bar and should update dynamically as the user manipulates the corresponding GUI element.

(25pts) **yourlastname\_lab7b2.java**: Please design and create an application that lets the user specify the X,Y coordinates of the top left corners of two rectangles, as well as their height and width. Once specified, a button should be used to draw both rectangles in a display pane. The application should report whether the two rectangles intersect (also using a GUI element, not via a print to the console in NetBeans). Note: the exact design of this program is up to you, as long as it meets the described requirements, feel free to use any GUI components you find helpful to solve the problem.