CPSC 352

Project 3: Photoshop Nano

In this exercise you will write an interactive, event-driven graphics program. This simple Canvas/JS paint program should allow the user to paint, draw lines, and draw solid rectangles. For extra credit, it should also allow the user to blur or sharpen the image and to detect edges using convolutions. In order to reduce effort required in getting started and on less essential parts of the program, you will be given starter code that implements most of the user interface.

Your program should have the following capabilities:

1. Paintbrush tool that draws without crinkles
2. Line and rectangle tools that use rubber-banding feedback
3. Eraser paints the background color
4. Color picker lets the user set the drawing color
5. Size picker lets the user select the size of the paintbrush and line tools, with visual feedback
6. The above tools should be selectable on a toolbar. The toolbar should use 4-state visual feedback for the buttons, which should work like radio buttons
7. There should be load and save options. (These will be given in the sample code.)
8. There should be blur, sharpen, and detect edges options using convolutions
9. There should be a menu system for controlling the program

The sample code is accessible from the projects page, under Example 3. To submit your program, please copy it to ~/public_html/352/proj3 on a ulab machine so that it is accessible from the appropriate link on the project. Also fill out the top of the grading sheet on the opposite side of this page and turn it in.
CS 352 Project 3: Photoshop Nano
Grading Sheet

Name ____________________________________  Date turned in ________ Late? ______

Parts of the program I didn’t get to work:

Comments on this assignment:

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For grader’s use ---------------------------------------------------

Basic program (50)
• Runs in Chrome
• Toolbar and menu options control the program

Paint, eraser tools: paint and erase without crinkles, respecting color and size selections (10)

Line and rectangle tools with rubber band feedback, respecting size selection (10)

Four-state button feedback on the toolbar (10)

Blur, sharpen, and edge detection options implemented as convolutions (10)

Programming style, submission process (10)