Mobile Development CSCI 3113

Team Project 01
Last Updated: 1/24/2021 10:07 PM

Goal

The purpose of this assignment is to work as a team to build an image transformation tool. The application will load an image and have buttons to transform the image to Gray scale, Sepia Tone and a 3rd image transformation of the teams choosing. There are out of the box filters and image transformations to do this, but the team needs to create the Gray scale, Sepia and 3r transformation bit by bit looping through the pixels in the image.

Gray Scale calculations:

Set all three RGB colors to the same value of the following calculation:

outputColor = (inputRed + inputGreen + inputBlue) / 3

Sepia Tone calculation:

Sepia Tone is a little more complex.

Color	Factor Red	Factor Green	Factor Blue
Red	0.393	0.769	0.189
Green	0.349	0.686	0.168
Blue	0.272	0.534	0.131

outputRed = (inputRed * 0.393) + (inputGreen * 0.769) + (inputBlue * 0.189)
outputGreen = (inputRed * 0.349) + (inputGreen * 0.686) + (inputBlue * 0.168)
outputBlue = (inputRead * 0.272) + (inputGreen * 0.534) + (inputBlue * 0.131)

Program Features:

1) Use 2 ImageViews
   a. One for the Image selected
   b. One for the transformed image
2) Create a button for Gray Scale when the button is clicked take the original image and transform it to Gray Scale one pixel at a time using the Gray Scale calculation above.
3) Create a button for Sepia Tone when the button is clicked take the original image and transform it to Sepia Tone one pixel at a time using the Sepia Tone calculation above.

4) Create a button for the 3rd transformation the team decides on converting the original image using your team's transformation a pixel at a time.
5) Document the transformation and what it does and reference any websites that were used for the transformation.

NOTES:
- PLEASE TURN THE TEAM PROJECT IN ON TIME IT WILL BE WORTH ZERO (0) POINTS IF LATE.
- The team needs to work together on this project, and everyone needs to contribute to the solution.
- The team needs to select one person on the team to turn in the project and documentation.
- The final solution needs to include documentation and code solution in the following format:
  - TP01_[Team Name].zip
- Be as creative or as simple as you like with your project, fonts, colors, etc.