Manipulation of Colors Lab

In a new class write these loops to make each change to an unchanged original picture.

Test each one for accuracy on multiple instances of the same picture

/sets the red,green,blue to 255 for all pixels

public void maxBlue()

public void maxRed()

public void maxGreen()

//changes the picture to a negative

//opposite color 0 is 255, 1 is 254, 2 is 253 and so on

public void negate()

//changes the color by the factor given test at:

// red 50%, green 150%, blue 25%

public void adjustRed(double factor)

public void adjustGreen(double factor)

public void adjustBlue(double factor)

//convert picture to grayscale

//gray scale is where all values of RGB are the same

//picture should not be a block of gray

public void grayscale()

//use the color methods to lighten and darken

public void lighten()

public void darken()

//changes the color of each pixel in the picture object by

//amounts @param redAmount the amount to change the red value

Public void changeColors(double redAmount,

double greenAmount,

double blueAmount)

//"blue-ify" a face, create algorithm to make your face blue

//"cloroify" some aspect of a face (hair, eyes, teeth) and change

// to a radically different color

// find the rgb of your eyes/hair/face change all pixels that are close to that color (+ or – 10,15,20)

public void blueify()

public void colorify()

//swap2 colors – swap the green value for the red value

//swap3 colors – swap all three red = green, green = blue, blue = red

//you can use other combinations

public void swap2()

public void swap3()

Grade:

Check off pictures adjusted by new methods (adjusted from original). You may have to make several picture objects so clearBlue() does not change a picture that has already called negate()

required: DISPLAY FOR TEACHER IN THE ORDER BELOW

●1 of maxBlue(), maxRed(),maxGreen()

●negate()

●1 of adjustRed(double factor), adjustGreen(double factor), adjustBlue(double factor)

●grayscale()

●lighten() or darken()

●colorify()

●swap2()

●swap3()

Picture p = new Picture("images\\file.jpg");

Picture p2 = new Picture("images\\file.jpg");

Picture p3 = new Picture("images\\file.jpg");

Picture p4 = new Picture("images\\file.jpg");

p.explore();

p.maxBlue();

p.explore();

p.negate();

p.explore();

p2. adjustRed(10);

p2.explore();

p.grayscale();

p.explore();

p4.changeColors(23,56,67);

p4.explore()