**Picture Lab Activity #5 – Modifying a Picture**

1. Open Picture.java and look for the method getPixels2D. Is it there?

2. Open SimplePicture.java and look for the method getPixels2D. Is it there?

3. Does the following code compile?

DigitalPicture p = new DigitalPicture();

4. Assuming that a no-argument constructor exists for SimplePicture, would the following code compile?

DigitalPicture p = new SimplePicture();

5. Assuming that a no-argument constructor exists for Picture, does the following code compile?

DigitalPicture p = new Picture();

6. Assuming that a no-argument constructor exists for Picture, does the following code compile?

SimplePicture p = new Picture();

7. Assuming that a no-argument constructor exists for SimplePicture, does the following code compile?

Picture p = new SimplePicture();

Complete Exercises 1 – 6 – copy and paste your code here

public void keepOnlyBlue(){

Pixel[][] pixels = this.getPixels2D();

for (Pixel[] rowArray : pixels)

{

for (Pixel pixelObj : rowArray)

{

pixelObj.setRed(0);

pixelObj.setGreen(0);

}

}

}

public void negate(){

Pixel[][] pixels = this.getPixels2D();

for (Pixel[] rowArray : pixels)

{

for (Pixel pixelObj : rowArray)

{

pixelObj.setRed(255 - pixelObj.getRed());

pixelObj.setBlue(255 - pixelObj.getBlue());

pixelObj.setGreen(255 - pixelObj.getGreen());

}

}

}

public void grayscale(){

Pixel[][] pixels = this.getPixels2D();

for (Pixel[] rowArray : pixels)

{

for (Pixel pixelObj : rowArray)

{

int color = (pixelObj.getRed() + pixelObj.getBlue() + pixelObj.getGreen()) / 2;

pixelObj.setRed(color);

pixelObj.setBlue(color);

pixelObj.setGreen(color);

}

}

}

public void fixUnderwater(){

Pixel[][] pixels = this.getPixels2D();

for (Pixel[] rowArray : pixels)

{

for (Pixel pixelObj : rowArray)

{

if(pixelObj.getBlue() > pixelObj.getGreen()){

pixelObj.setBlue(255);

}

}

}

}