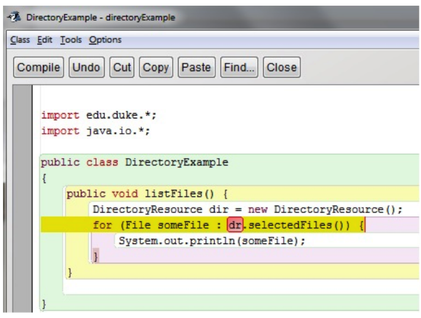
Congratulations! You passed! Next Item

1 / 1 points

1. Consider writing code to list out files in one of your folders using **DirectoryResource**. The following attempt at writing such code has an error.



Which one of the following best explains what the error is?

1 / 1 points

2. Shown below is the code that was developed in one of the videos to convert many images to grayscale and to display those grayscale images.

```
import edu.duke.*;
import java.io.*;
public class GrayScaleConverterBatch
{
    public ImageResource makeGray(ImageResource inImage) {
        ImageResource outImage = new ImageResource(inImage.getWidth(), inImage.getHeight());

        for (Pixel pixel: outImage.pixels()) {
            Pixel inPixel = inImage.getPixel(pixel.getX(), pixel.getY());

            int average = (inPixel.getRed() + inPixel.getGreen() + inPixel.getBlue())/3;

            pixel.setRed(average);
            pixel.setGreen(average);
            pixel.setBlue(average);
        }

        return outImage;
    }

    public void selectAndConvert() {
        DirectoryResource dr = new DirectoryResource();
        for (File f: dr.selectedFiles()){
            ImageResource inImage = new ImageResource(f);
            ImageResource gray = makeGray(inImage);
            gray.draw();
        }
    }
}
```

Consider adding additional code to this program to save each of the new grayscale images created as a file.

Which one of the following is the best method to modify to make this change?

1 / 1 points

3. Suppose one wants to convert a given image to grayscale and then display and save the resulting grayscale image as a file.

The code below has been started for you. The variable **f** is a file of an image and the method **makeGray** returns an image that is the grayscale image of the original image.

```
1  ImageResource original = new ImageResource(f);
2  ImageResource grayscale = makeGray(original);
3  [MISSING CODE]
```

Which one of the following is the missing code that will convert the original image into a new file that is a grayscale version of the original image?

1 / 1 points

4. Consider writing a program to create new images that are photographic negatives (or inverted images) of selected images.

In inverting an image, a pixel's red, blue and green components are modified to be the exact opposite within the 0 to 255 range. That is, if a pixel's red, blue, and green values are (34, 198, 240) then that same pixel in the inverted image would have the red, blue, and green values of (221, 57, 15). Note that 255 - 34 is 221, 255 - 198 is 57, and 255 - 240 is 15.

For example, these images show the original and inverse images of Robert.

Suppose a pixel has RGB values of (100, 30, 250).

Which one of the following shows the correct RGB values for the inverted pixel?

1 / 1 points

5. Consider writing a program to create new images that are photographic negatives (or inverted images) of selected images.

Suppose we have a Pixel named **pxInvert** and a Pixel named **pxOriginal**.

What is the line of code to change **pxInvert**'s red color to the inverted red color of **pxOriginal**?

Hints: Start with **pxInvert.setRed**

Remember the semi colon at the end.

0 / 1 points

6. Consider writing a program to create new images that are photographic negatives (or inverted images) of selected images.

Suppose we have an ImageResource variable named **picture** whose current value is for an image file named **dragon.png**. See the following code segment below.

```
1  ImageResource invertImage = makeInverted(picture);
2  String fname = picture.getFileName();
3  invertImage.setFileName("inv-" + fname);
4  invertImage.draw();
5  invertImage.save();
```

What is the name of the resulting file?