**Picture Lab**

**Introduction**

In this lab you will be writing methods that modify digital pictures. In writing these methods you will learn how to traverse a two-dimensional array of integers or objects. You will also be introduced to nested loops, binary numbers, interfaces, and inheritance.

**Activities**

You will be working through a set of activities. These activities will help you learn about how:

* digital pictures are represented on a computer;
* the binary number system is used to represent values;
* to create colors using light;
* Java handles two-dimensional arrays;
* data from a picture is stored; and
* to modify a digital picture.

**Set-up**

You will need the pixLab folder. Just open the files in the classes folder and compile them. Please note that there are two small pictures in the classes folder that need to remain there: leftArrow.gif and rightArrow.gif. If you copy the Java source files to another folder you must copy these gif files as well.

Keep the images folder and the classes folder together in the pixLab folder. The FileChooser expects the images to be in a folder called images, at the same level as the classes folder. If it does not find the images there it also looks in the same folder as the class files that are executing. If you wish to modify this, change the FileChooser.java class to specify the folder where the pictures are stored. For example, if you want to store the images in “r://student/images/,” change the following line in the method getMediaDirectory() in FileChooser.java:

URL fileURL = new URL(classURL,"../images/");

And modify it to

URL fileURL = new URL("r://student/images/");

Then recompile.