# Commentary: Week 6

CSE120: Computer Science: Principles

This week the students have a much lighter schedule, mostly because they worked hard for the midterm they just took, and they probably have other midterms.

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| Lecture 14 | Lab 8 | Lecture 15 | Lab 9 | Lecture 16 |
|  | | Assignment 12 | | Assignment 14 |

**Lecture 14:** Recursion, which was covered on the second day via its use in Lightbot 2.0, allows us to begin there. The main things to get across are (a) it’s just not that big of a deal, (b) it is often easier, as with the alternating purple/gold boxes, (c) usually there is a basis case and a recursive case, (d) you can actually figure out what’s going on if you remember, that it is possible to suspend a function while a function it called is being run. Also, it makes pretty stuff!

**Assignment: N/A**

**Lab 8:** This is the recursion lab. It has been updated and connects to Monday’s lecture in that it repeats code written there. Students work with a recursive tree program, coloring the levels uniquely. Using some further modifications to emphasize focusing on what happens before a call and what happens afterwards, students answer a sequence of questions about the behavior of the program; this could be a survey if a more directed coverage is preferred. They are encouraged to try everything out. EMPHASIZE IN THE TREE EXAMPLE THAT THE BOXES ARE DRAWN LEFT TO RIGHT IN ORDER!

**Lecture 15:** This is the “social use” of computers … there is no need to explain FB or Twitter. So, we focus on making the world better through technologically assisted society. The role technology, esp. computers, plays in making life better for the handicapped is an inspirational topic that students love; it’s career defining for some. Also, we cover the concept of crowd sourcing.

**Assignment 12:** This assignment is simply designed to work students through the process of displaying an image in Processing. The “Adele App” is kind of fun. Two other topics are embodied in the exercise. First, the 2D to 1D conversion is needed because pixels are laid out linearly in Processing. Second, the println( ) function is described and used, since students will be writing more complex code later.

**Lab 8:** The Colors of Silver is another “get some experience with images” exercise, and it can be a chance to help students struggling with Assignment 12, if any. Basically, all the assignment does is pick out the RGB value from the pixels, “adjust” it somehow, and return it to its original place. There is a little control of the sort that will be needed in the pairs programming project.

**Lecture 16:** This is the privacy lecture and it has been substantially revised. Privacy is defined. The Target Inc case is also discussed, since it is especially creepy. Edward Snowden’s revelations are covered briefly, simply as a means of applying the Fair Information Practices to the contemporary problem of archiving metadata. We eventually move on to copyright, which isn’t privacy but rather respect for someone else’s information.

Notice, of all of the lectures in this class, this lecture gets modified the most to address new information.