# Commentary: Week 3

CSE120: Computer Science: Principles

The week’s goal is to continue learning The Processing Visualization Language.

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| Holiday | Lab 5 | Lecture 7 | Lab 6 | Lecture 8 |
| Assignment 6 | | Assignment 7 | | Assignment 8 |

**Lecture NOT:** CS Principles taught winter term at UW has a holiday Monday – MLK. Because Assignment 6 has been written to be less do-this-do-that and more about achieving specifications, students have a little extra time to complete it.

**Lab 5:** The goal of this exercise is to introduce event processing, namely keyPressed( ) and mousePressed( ). The exercise is very much a do-this-do-that with simple code so students can see the effect of what they do. It’s not conceptually difficult and they catch on quickly. The “explain” what’s happening with the color rotation should include making the point that to pass a value along, it’s necessary to have a temporary holding place for one value as the process gets underway. My goal eventually is to make this a programming idiom.

**Lecture 7:** This is a very intense lecture as it rockets along touching on assignment, operators and expressions, details on mod, iteration and if. I DON’T EXPECT STUDENTS TO GET THIS ALL FROM THIS PRESENTATION. Rather, much of it is intuitive (operators work like a calculator) and we’ll exercise the things that are not, e.g. iteration and testing, in Lab 6 and as we go along. One goal that should be achieved is to convey how mod (%) works, and how it makes the ninja jump.

**Assignment 7:** The goal of this assignment is to combine concepts, namely controlling motion and controlling color through functions using a more complex figure. The point is to solidify the last Lab activity. I think it is pretty straightforward, but maybe not. (This is an adjusted version of the assignment I actually gave which was so badly specified almost no one got it all.)

**Lab 6:** This lab is designed to focus on the basic components of if-statements and for-statements by providing exercises exploring what happens when the components are changed. (This is a new assignment, again, correcting an error I made in this lab.) The lab would benefit with a quick review of the two statement forms, though it is also provided in the instructions.

**Lecture 8:** The CS Principles is a combination of hands on programming and more traditional lecture-based material. This is the first of those lectures. Its purpose is to show the century-long march to digitization form Hollerith to WWW. When I give it I emphasize the importance of

* representing information so a machine can read it (holes punched)
* the changing a machine simply by programming rather than rewiring (computers)
* the fact that transistors have no moving parts to wear out
* the genius of integration and photolithography making computers cheap
* the power of connecting computers – connections grow as n2
* the power of one-world language letting computers interact (http)

These truly are the greatest hits of computing.

**Assignment 8:** This assignment is practicing if statements, and preparing for the app programming that is coming later when draw( ) has to produce a variety of frames. This is basically an exercise, though I think it is fun. It uses a “monster” suggested by the MonstersInc movie. The first if-statement is given, but after that the if-statements are student produced. My hope would be that the assignment is easy enough that students will horse around with the code, for example, by changing the parameters and combining the motions. These could be added for extra credit. (Again, this is an untested exercise.)