Question 1 - What were the elements of programming that you learned in your FOP course?

Straight from the FOP syllabus we learned about these six topics:

- trace a segment of code to determine the result produced or state achieved by given code
- modify a provided piece of code to accomplish a given task
- choose and sequence action statements to accomplish a given task
- develop and use selection statements (if-then, if-then-else, etc.) to control selection between actions
- develop and use iteration statements (for, while) to control repetition of actions
- explain the concepts of sequence, loops, parallelism, events, conditionals, operators, variables, and lists within the context of computer science.

As a group we all agreed that going through the concepts in Scratch first, was a great way to get introduced to the topics and concepts. Scratch is constructed in a very playful atmosphere where you are able to easily experiment and see what works/doesn’t work. For some of us Scratch was new, and for others that had experienced it already it was great to gain more knowledge than we previously had. Block coding, algorithms, programs, sequencing, and loops were all familiar to Alli and worked very similar in Scratch. She knew very little about events, conditionals and variables prior to working with Scratch. Tigh mentioned in text-based environments like Python, it’s hard for a beginning programmer to experiment in this way because thinking of the syntax to piece together is a bit more difficult. While playing with Scratch, you start to notice patterns and sequences that seem to fit together nicely.

When making connections between what we already knew and what we were learning about programming, we all have different backgrounds when it comes to programming. Whether it being a tech background or a math background, I feel all of us went into Python a little unsure of what to expect. Whether it be the nerves, or not confident about our coding skill levels, or even what to expect from the programs we were writing. In particular, Tigh’s previous experiences with mathematical proofs and also algorithms have aided in helping him understand the nature of coding. In both of these topics, reasoning and structure are necessary to truly understand the concepts. One thing Alli didn’t expect while programming in Python was the amount of math involved. She has an elementary math endorsement, but many of the formulas and calculations she had not thought about for a long time. For Matt, taking the programming class has allowed him the knowledge to talk about problems that students may/are running into and also helped him with project ideas and concepts as they maneuver thru some Python curriculum this semester.

Vocab Words
Python – Idle, Python Shell, Functions, Boolean Expressions, Selection Statements (if, elif, else), Loops, Def, Return, Fin, Fout, Lists, Pop, Insert, Sort, Reverse.