BST281: Genomic Data Manipulation, Spring 2017

Wednesday 02: Python Collections, Loops, and Conditionals

# Python: review

* Scalar data types (strings, ints, floats, Booleans)
* Assigning data to variables
* Indexing and slicing

**Python: new material**

* The notion of a “data collection”
* The list
	+ A built-in, ordered collection of (potentially repeated) elements
* The dict
	+ A built-in, unordered collection of (key, value) pairs
* The for loop
	+ Syntax for executing the same block of code multiple times
	+ In Python, the for loop performs a set of actions on each element of an “iterable” piece of data, often one of the built-in data collections
* The if…else statement
	+ Syntax for achieving “flow of control” in a program
	+ Do one thing if a given statement is True, do something else if is False
	+ “Statements” are often functions/operators applied to data
* The while loop
	+ Syntax for performing an action (block of code) as long as a statement is True
	+ If the statement is always True, a while loop will run forever

# Suggested textbook reading

* Haddock & Dunn, Chapter 7
* Haddock & Dunn, Chapter 9