Summary: Chapter 2 Page 17 to 40

After the initial chapter, which helped with setting up python, chapter 2 goes over some of the basic python concepts. It is important to run code encountered in this chapter to see errors and learn how to debug as we go.

The essential building blocks for working with data in python are datatypes such as strings, integers, floats and non-whole numbers. Strings are text denoted by single or double quotes. We use integers and floats to handle numbers in python. An integer is usually a whole number but sometimes it is helpful to store numbers as strings, especially when it starts with a zero because python does not know how to store a number starting with a zero.

Also, it is important to note that when non-whole numbers are used python turns the value into floats because python sees numbers differently from us and a calculator. For example, 0.3 and 0.3000000000004 are not equal. So, when accuracy matters, we should use the decimal module or library to make your number a float.

Python has other datatypes called data containers which hold multiple data points. These are variables, lists and dictionaries. Variables gives us ways to store values that we will call later. List is a group of values related to each other which can be of the same datatype or a mixture of datatypes. You can also have a list of lists. A python dictionary like in an actual regular dictionary has words to look up, called keys. The definitions of the words are called values. These various data types can do many things, called methods, and they are performed by using (.) notation. For example, string methods are things strings can do like strip off space from a string by using the strip method.

Numerical methods are things numbers can do. The list methods are things list can do. There are few must- know methods such as append and remove. We also have the dictionary methods which allow us to learn more about large and unknown dictionaries. Also, note that python has built-in tools such as type, dir, and help to assist you to respectively identify the data type used, find out what method is used and return documentation on an object. In order, to do some of the tasks above it is important to import some module from python standard library like sys and pprint.