Introduction to Python Computer Programming

North Star High School

Unit 10

Lists

# Reading Material

The text for this unit is Think Python chapter 10 (pages 89 through 102).

It is encouraged to work on your reading with the Python interpreter open on your computer, so that you can type in the examples and experiment as you read.

# Guided Reading

Please complete the following questions using the assigned reading above.

1. Like a string a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a sequence of values. (list)
2. The elements of a list \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have to be the same type! (don’t)
3. A list within another list is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (nested)
4. Values in a list are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (elements) or sometimes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . (items)
5. A list that contains no elements is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ list. (empty)
6. The indices for a list start at the number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (zero)
7. The most common way of traversing a list is with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (for loop)
8. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ operator concatenates lists, which is to say the 2nd list is appending to the first. (+)
9. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ method adds a new element to the end of the list. (append)
10. An operation that combines a sequence of elements into a single value is sometimes called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (reduce)
11. An operation that “maps” a function onto each of the elements in a sequence is sometimes called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (map)
12. An operation is sometimes called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because it selects some of the elements and filters out the others. (filters)
13. Two lists are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (equivalent) if they contain the same elements, but are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (identical) if they are the same object.
14. The association of a variable with an object is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (reference)
15. An object with more than one reference is said to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (aliased)

**Be sure that you are familiar with all of the definitions in the glossary (section 10.14)!**

# Assignment

1. Exercise 10.1 in the textbook. (ex\_10.1.py)
2. Exercise 10.2 in the textbook. (ex\_10.2.py)
3. Exercise 10.3 in the textbook (ex\_10.3.py)
4. Exercise 10.4 in the textbook (ex\_10.4.py)
5. Exercise 10.5 in the textbook (ex\_10.5.py)
6. Exercise 10.6 in the textbook (ex\_10.6.py)

If time allows, please complete exercises 10.10 and 10.12 in the textbook. (inlist.py and interlock.py)