Introduction to Python Computer Programming

North Star High School

Unit 8

Strings

# Reading Material

The text for this unit is Think Python chapter 8 (pages 71 through 81).

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. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a sequence of characters. (string)
2. In the following example:

|  |
| --- |
| letter = fruit[1] |

The expression in brackets is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (index)

1. For computer scientists, the index is an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_from the beginning of the string. (offset)
2. The value of an index has to be an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (integer)
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a built-in function that returns the number of characters in a string. (len)
4. The pattern of processing a string one character at a time is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (traversal)
5. A segment of a string is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (slice)
6. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is represented by two quotation marks. (empty string)
7. In Python, strings are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , which means you can’t change an existing string. (immutable)
8. Traversing a sequence and returning once the desired item is found is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (search)
9. Incrementing a variable each time a specific letter if found during a loop is an example of a pattern of computation called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (counter)

**Be sure that you are familiar with all of the definitions in the glossary (section 8.12)!**

# Assignment

1. Exercise 8.1 in the textbook. Follow the link in the textbook and become familiar with some of the string methods available. Do not try to understand every detail, just try to become familiar. (there is nothing to turn in for this question)
2. Exercise 8.2 in the textbook. (ex\_8.2.py)
3. Exercise 8.3 in the textbook. Note that the function body will be one line, so two lines total (the function definition takes one line). (ex\_8.3.py)
4. Exercise 8.4 in the textbook.

(Answers:

* The function any\_lowercase1 returns True if the first letter of the string is lowercase, and returns False otherwise.
* The function any\_lowercase2 always returns True, since it first checks if the character ‘c’ is lowercase, rather than checking the character that is held in the variable c. The input to this function doesn’t matter!
* The function any\_lowercase3 returns True if the last character of the string is lowercase, otherwise returns False.
* The function any\_lowercase4 correctly checks whether a string contains any lowercase letters.
* The function any\_lowercase5 also correctly checks whether a string contains any lowercase letters.

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If time allows, please complete exercise 8.5 in the textbook. (rotate.py)