

Grades 9-12

Distance Learning Module 5: Week of: April 27 - May 1

## Introduction to Computer Science Honors - *Modified from [Unit 6 \(Working with Strings\)](#)*

### Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** what a string is, how to iterate through all of the characters in a string using several different techniques, how to create a list of strings, that a string is a collection of characters that can be searched and manipulated, that strings are immutable, how to retrieve substrings from a string, designing algorithms

**Vocabulary:** string, character, list, function, method, class, parse, index, slice, algorithm, substring

**Skills:** using many of the built-in string methods to construct new strings from existing strings, working with functions and script files, creating functions, decomposing a problem into smaller parts, passing strings as argument to functions, return strings from functions

### Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Note: We need to insert another day (or 2) in the beginning of this module to finish the introduction to Strings from last week: <ul style="list-style-type: none"><li>String slicing practice</li><li>String algorithms (zip code validation)</li></ul>		
Monday: Students will begin working on a multi-day programming assignment, and will record their progress.	Live lesson introducing the String Algorithms Programming Assignment  Module5and6ProgrammingAssignmentLevel 1	String Algorithms Daily Progress Report - Level 1
Tuesday:	Live help sessions	String Algorithms Daily Progress Report - Level

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Students will continue working on a multi-day programming assignment, and will record their progress.	Module5and6ProgrammingAssignmentLevel 1	1
Wednesday: Students will continue working on a multi-day programming assignment, and will record their progress.	Live help sessions  Module5and6ProgrammingAssignmentLevel 1	String Algorithms Daily Progress Report - Level 1
Thursday: Students will continue working on a multi-day programming assignment, and will record their progress.	Live help sessions  Module5and6ProgrammingAssignmentLevel 1	String Algorithms Daily Progress Report - Level 1
Friday: Students will continue working on a multi-day programming assignment, and will record their progress.	Live lesson resolving common obstacles and hints for week 2.  Module5and6ProgrammingAssignmentLevel 1	String Algorithms Daily Progress Report - Level 1

**Week criteria for success** (attach student checklists or rubrics):

By the end of this module, students should be able to:

- iterate through a string
- create substrings
- use string methods to manipulate strings and test string conditions
- write functions that receive and/or return strings

**Supportive resources and tutorials for the week** (plans for re-teaching):

Think Python, 3rd Edition (free online Python book)

Coding Bat

Office hours

Python Programming Third Edition by John Zelle. This textbook provides additional examples and content, and is available for purchase from Amazon and other retailers.

Stack Overflow post

Introduction to Problem Solving Video

Strings video Part 1 - Basic Characteristics and Iteration with For loops

Strings video Part 1b - Iteration with While loops

Strings video Part 2 - Commonly Used Methods