CODE LAB I

ASSESSMENT 1: Programming Skills Portfolio

Contribution towards overall module mark	40%
Date set	September 12, 2023,
Marked work returned by	Within 3 weeks of submission
DEADLINES	Deadline: Nov 4, 2023 – 23:59

Assessment 1: Programming Skills Portfolio

Students Name	Andrea Cyra Valenzuela Bautista
Roll No	2023748
Assignment Brief	** **Chapter 1- Getting Started with Python** Introduction to Python programming: Download your code editor and Python Reader. **Objective:** The major objective of this Chapter is to develop and demonstrate fundamental Python programming skills. After completing these exercises, you will have gained proficiency in basic programming tasks like string manipulation, data retrieval, and mathematical computations. Here are the specific 5 goals for this chapter: • **Exercise 1: Print Strings** Goal: Formatting and printing a predefined string in a particular way. • **Exercise 2: Print the Version of Python** Goal: Enhance your abilities to access system information by retrieving and displaying the Python version that is being utilized. • **Exercise 3: Print date and Time** Goal: Show that you can retrieve and display the current date and time, which will expand your understanding of datetime functions. • **Exercise 4: Strings Concatenation** Goal: Combining multiple strings into a single output, reinforcing your string manipulation skills. • **Exercise 5: Compute the Area of a Circle**

Goal: Utilize user input to calculate the area of a circle, further enhancing your programming skills and mathematical calculations

****Chapter 2- Variables & Comments –**

Objective:

You will get to experience using Python's variables, strings, and arithmetic operations in this project. To bolster your comprehension of these core ideas, you will work through 5 goals for this chapter:

- **Exercise 1: Variables**
  Goal: The goal here was to reinforce knowledge of basic Python variable usage by demonstrating the ability to assign, alter, and output variable values.
- **Exercise 2: Variables**
  Goal: To have experience in the extraction and presentation of data from variables, with a focus on handling string data and formatting requirements.
- **Exercise 3: Stripping Names**
  Goal: To use variables and whitespace characters to make code easier to understand, and to master string stripping routines to increase string manipulation abilities.
- **Exercise 4: Favorite Number**
  Goal: To demonstrate how to combine text and variables to create meaningful messages, improving output formatting and string manipulation skills.
- **Exercise 5: USB Shopper**
  Goal: Using arithmetic operators to solve real-world problems, figure out how many USB sticks are affordable within a certain budget, and improve mathematical

****Chapter 3 Structures –**

Objective:

This Chapters aims to strengthen your comprehension of Python lists and how to manipulate them. To improve your ability to deal with lists, you will complete seven activities, each of which focuses on a different set of 7 goals for this chapter:

	• **Exercise 1: Names** Goal: To show mastery of list building and element access by creating and accessing a list of friends' names. • **Exercise 2: Greetings** Goal: To print and customize messages for every buddy on the list while strengthening the manipulation of list elements and string formatting. • **Exercise 3: Your Own List** Goal: To create statements on preferred forms of transportation, practice making lists and producing simple text output. • **Exercise 4: Guest List** Goal: Improve list manipulation and string handling abilities by creating and sending customized dinner invites to individuals. • **Exercise 5: Change Guest List** Goal: To practice list modification and handle guest list modifications by sending out fresh invites to people who are unable to attend. ****Chapter 4 Control Flow.** **Objective:** Gaining a solid knowledge of conditional statements and Python decision-making is the aim of this project. You will do 5 goals for this chapter that cover various facets of if statements and conditional reasoning. • **Exercise 1: Alien Colors #1** Goal: To familiarize yourself with simple if statements and show you how to use them to verify conditions and respond to variables based on their values. • **Exercise 2: Alien Colors #2** Goal: To apply if-else chains to differentiate between two circumstances and handle both possible outcomes in order to deepen our grasp of conditional logic. • **Exercise 3: Alien Colors #3** Goal: To improve the proficiency in conditional logic by employing an if-elif-else chain, distinguishing between various situations, and offering unique answers according to the value of a variable. • **Exercise 4: Stages of Life**

Goal: To utilize if-elif-else chains to practice using different circumstances and accompanying messages in order to establish an individual's life stage depending on their age.

- **Exercise 5: Favorite Fruit**

  Goal: To strengthen comprehension of independent if statements so that the application can look for certain fruits in a list and print messages that are tailored to each one if they are found.

****Chapter 5 Dictionaries**

Objective:

This Chapter aims to improve your knowledge of Python dictionaries, data representation, and looping across data structures. You will do 5 goals for this chapter that cover various facets of utilizing dictionaries and data representation.

- **Exercise 1: Person**

  Goal: To show how to create and use a dictionary to store and retrieve personal information.
- **Exercise 2: Glossary**
- Goal: To practice constructing a dictionary that resembles a glossary and links programming words to their definitions while highlighting appropriate formatting and newline usage.
- **Exercise 3: Glossary 2**

  Goal: To increase code efficiency and demonstrate how to iterate over the keys and values of a dictionary, adding new items to the glossary and automatically incorporating them in the output.
- **Exercise 4: Rivers**

  Goal: Using loops to produce lists of related nations and instructive statements, a dictionary representing significant rivers and the countries they flow through will be created.
- **Exercise 5: Pets**

  Goal: Making dictionaries for different pets and storing them is the goal.

****Chapter 6 Loops**

Objective:

The purpose of this Goal is to solidify your comprehension of Python looping and control flow. You will finish five Goals that cover various facets of Python loops and decision-making.

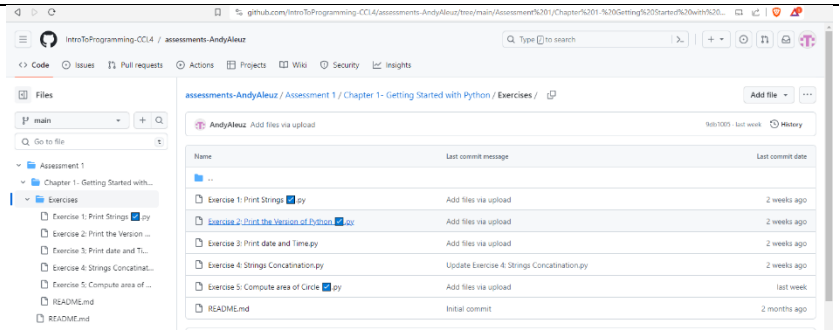
- **Exercise 1: Pizza Toppings**
  Goal: To practice putting in place a loop that continuously asks for input from the user and reacts appropriately, so encouraging user involvement and loop control.
- **Exercise 2: Movie Tickets**
  Goal: To improve comprehension of conditional logic and decision-making in a practical setting by showing how to utilize loops to calculate ticket pricing based on user input.
- **Exercise 3: Infinity**
  Goal: To observe an infinite loop and become acquainted with its behavior and manual termination techniques, in order to strengthen the understanding of loop control.
- **Exercise 4: Deli**
  Goal: This will allow you to practice list manipulation and iteration while also advancing orders to a finished list.
- **Exercise 5: No Pastrami**
  Goal: The goal is to include a while loop.

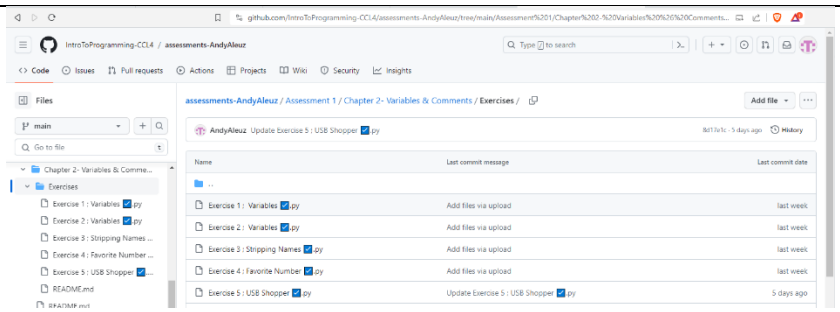
****Chapter 7 Functions**

Objective:

This Chapter aims to deepen your comprehension of Python functions and delve into the usage of default arguments. You will finish five exercises that cover various facets of parameter management and function construction.

- **Exercise 1: Message**
  Goal: To highlight the design and use of a fundamental function, "display_message," while also providing information about the learning objective for this chapter.
- **Exercise 2: Favorite Book**
  Goal: To improve function construction and parameter use abilities by writing the function "favorite_book," which takes a parameter and outputs a customized message about a favorite book.
- **Exercise 3: T-Shirt**
  Goal: To create a function called "make_shirt," which will allow users to create bespoke shirt descriptions and practice using positional and

	keyword arguments. The method will have parameters for shirt size and message. • **Exercise 4: Large Shirts** Goal: To enable default settings for both size and message in the "make_shirt" function, therefore demonstrating the utilization of default parameters and producing shirts with a range of sizes and messages. • **Exercise 5: Cities** Goal: To develop the function "describe_city," which will allow cities and their nations to be described, while also encouraging the use of default parameters in functions, by including a default parameter for the country.
Github Repository Name	AndyAleuz
Github Repository Link	https://github.com/IntroToProgramming-CCL4/assessments-AndyAleuz/tree/main/Assessment%201/Chapter%201-%20Getting%20Started%20with%20Python
Repository Screen Shot	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Exercise 2 : Variables .py
Exercise 3 : Stripping Names .py
Exercise 4 : Favorite Number .py
Exercise 5 : USB Shopper .py
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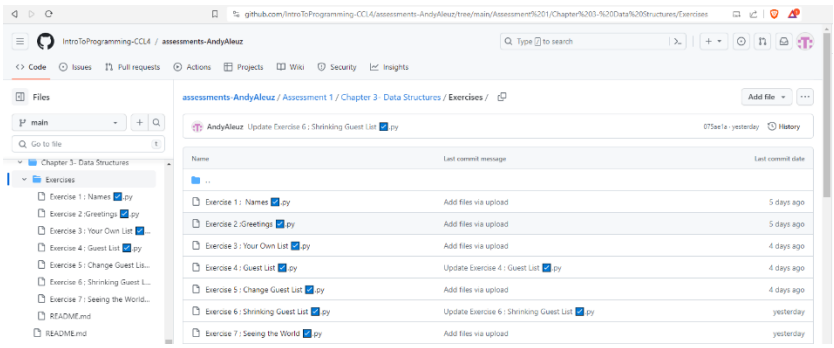
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Exercise 3 : Your Own List .py
Exercise 4 : Guest List .py
Exercise 5 : Change Guest List .py
Exercise 6 : Shrinking Guest List .py
Exercise 7 : Seeing the World .py
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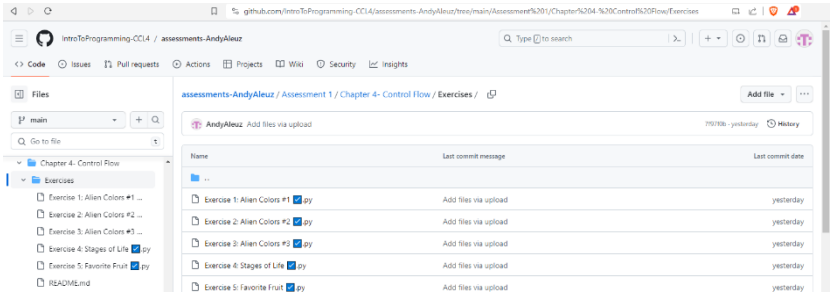
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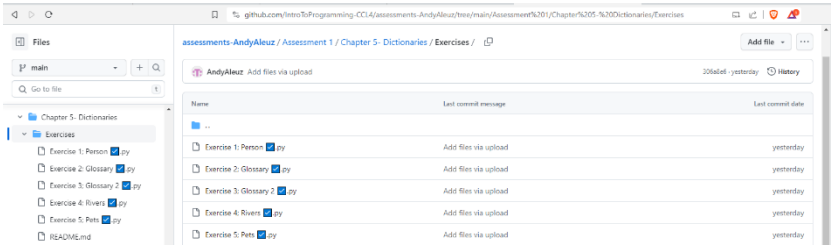
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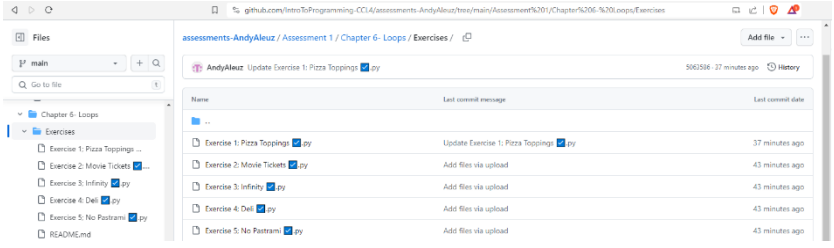
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	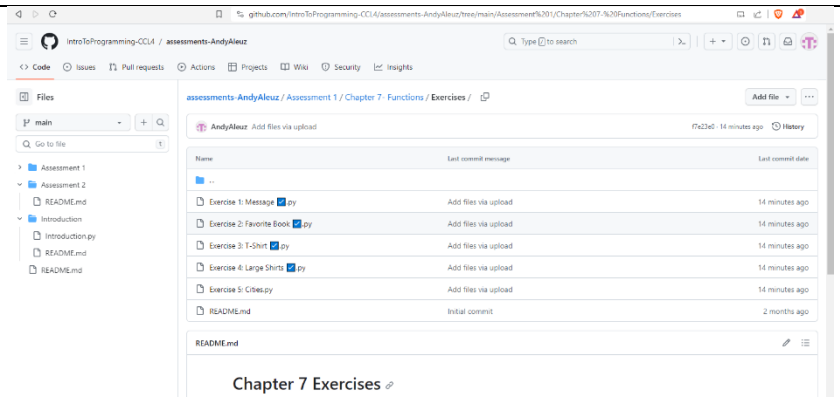
Other comments	"I found this class to be a delightful yet demanding learning opportunity that I thoroughly enjoyed."