**Python Basics**

* Python can distinguish among data types such as integers, floats, strings, and Booleans.
* Integers are whole numbers that can be positive or negative.
* Floats include integers as well as decimal numbers between the integers.
* You can convert integers to floats using typecasting, but you cannot convert a float to an integer.
* You can convert integers and floats to strings.
* You can convert an integer or float value to True (1) or False (0).
* Expressions in Python are a combination of values and operations used to produce a single result.
* Expressions perform mathematical operations such as addition, subtraction, multiplication, and so on.
* We use"//" to round off integer divisions, resulting in float values.
* Python follows the order of operations (BODMASS) to perform operations with multiple expressions.
* Variables store and manipulate data, allowing you to access and modify values throughout your code.
* The assignment operator "=" assigns a value to a variable.
* ":" denotes the value of the variable within the code.
* Assigning another value to the same variable overrides the previous value of that variable.
* You can perform mathematical operations on variables using the same or different variables.
* While performing operations with various variables, modifying a value in one variable will lead to changes in the other variables.
* Python string operations involve manipulating text data using tasks such as indexing, concatenation, slicing, and formatting.
* A string is usually written within double quotes or single quotes, including letters, white space, digits, or special characters.
* A string attaches to another variable and is an ordered sequence of characters.
* Characters in a string identify their index numbers, which can be positive or negative.
* We use strings as a sequence to perform sequence operations.
* You can input a stride value to perform slicing while operating on a string.
* Operations like finding the length of the string, combining, concatenating, and replicating, result in a new string.
* You cannot modify an existing string; they are immutable.
* You can perform escape sequences using " " to change the layout of the string.
* In Python, you perform tasks such as searching, modifying, and formatting text data with its pre-built string methods functions.
* You apply a method to a string to change its value, resulting in another string.
* You can perform actions such as changing the case of characters in a string, replacing items in a string, finding items in a string, and so on using pre-built string methods.