**Activity 1**

1. What is a string?

In Python, a string is a sequence of characters enclosed within single quotes (' ') or double quotes (" "). Strings are one of the most common data types in Python and are used to store and manipulate textual data.

Example: greeting = "Hello, world!"

1. What is an Integer?

In Python, an integer is a numeric data type that represents whole numbers (positive, negative, or zero) without any decimal point. Integers are represented by the **int** class in Python.

Example: x = 10

1. How to cast from string to integer?

To cast a string to an integer in Python, you can use the built-in **int()** function.

Example:

# variable

myString = "42"

# Cast string to integer

myInteger = int(my\_string)

1. How to cast from integer to string?

You can cast an integer to a string in Python using the **str()** function.

Example:

age = 27

age\_str = str(age)

1. Python has several naming conventions that are commonly followed by developers to write clean and readable code. Some of these conventions include:

Snake Case: This convention is used for naming variables, functions, and modules. In snake case, words are separated by underscores, and all letters are in lowercase. For example: **my\_variable**, **my\_function**, **my\_module**.

Camel Case: This convention is used for naming classes. In camel case, the first letter of each word is capitalized, and there are no underscores between words. For example: **MyClass**, **MyAwesomeClass**.

Upper Case: This convention is used for naming constants. In upper case, all letters are capitalized, and words are separated by underscores. For example: **MY\_CONSTANT**.

Single Leading Underscore: This convention is used to indicate that a variable or method should not be accessed from outside of its class or module. For example: **\_my\_private\_variable**, **\_my\_private\_function()**.

Double Leading Underscore: This convention is used to indicate that a variable or method is strongly private and should not be accessed from outside its class. For example: **\_\_my\_strongly\_private\_variable**, **\_\_my\_strongly\_private\_function()**.

Double Leading and Trailing Underscores: This convention is used for special methods or attributes in Python. For example: **\_\_init\_\_()**, **\_\_str\_\_()**, **\_\_len\_\_()**, **\_\_doc\_\_**.

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