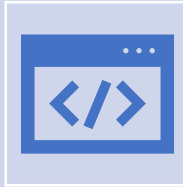# PYTHON-BASIC TO INTERMEDIATE

Learn with N@ima

Day 3

Python Strings

Python String

String is a data type in Python. String is a sequence of characters enclosed in quotes.

We can assign a **multiline string** to a variable by using **three quotes.**

Square brackets can be used to access elements of the string.

```
a = "Hello, World!"
print(a[3])
```

Slicing Strings

- A String in Python can be sliced for getting **a part of the string**.

- Specify the start index and the end index, separated by a colon, to return a part of the string.

- Consider the following string:

  name = "NAIMA" → length = 5

N	A	I	M	A
0	1	2	3	4
-5	-4	-3	-2	-1

- The **index** in a string starts from **0 to (length – 1)** in Python.

  string = **name[start : end]**

❖ first index included

❖ last index **is not included**

Slicing Strings

Slicing with Skip value:

We can provide a skip value as a part of our slice like this:
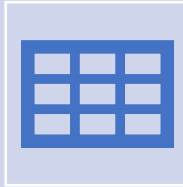
str = "amazing"

str[1:6:2] → 'mzn'

Others techniques:

str[:7] → str[0:7] → 'amazing'

str[0:] → str[0:7] → 'amazing'

String Format

We can combine strings and numbers by using the format() method.

The format() method takes the passed arguments, formats them, and places them in the string where the placeholders {} are.

The format() method takes **unlimited number of arguments** and are placed into the respective placeholders.

Escape Sequence Characters

Escape Sequence Character comprises of more than one characters but represents one character when used within the strings. To insert characters that are illegal in a string, use an escape character.

❖ An escape character is a **backslash ** followed by the character you want to insert.

\n→ new line

\t→ tab

\' → single quote

\\ → backslash

String Methods

Some of the mostly used **built-in methods** to perform operations on or manipulate strings are:

1. len():The len() function returns the length of a string.

       len('Naima') return 5

2. string.startswith(value, start, end): This function returns True if the string starts with the specified value, otherwise False.

3. string.endswith(value, start, end): This function returns True if the string ends with the specified value, otherwise False.

4. string.find(value, start, end): finds the **first occurrence** of the specified value. The find() method returns -1 if the value is not found.

5. string.index(value, start, end): finds the **first occurrence** of the specified value. The index() method raises an exception if the value is not found.

6. string.count(value, start, end): returns the number of times a specified value appears in the string.

String Methods

7. string.capitalize(): returns a string where the first character is upper case, and the rest is lower case.

8. string.upper(): returns a string where all characters are in upper case.

9. string.lower(): returns a string where all characters are lower case.

10. string.split(separator, maxsplit): splits a string into a list. Default separator is any whitespace.

11. string.replace(oldvalue, newvalue, count): replaces a specified phrase with another specified phrase.

12. string.join(iterable): takes all items in an iterable and joins them into one string. A string must be specified as the separator. Iterable is anything that you can loop over.

****All string methods **return new values**. They do not change the original string.

Practice Work

1. Write a program to display a user entered name followed by Good Morning using the input() function.

2. Write a program to fill in the following template with name and date.

   Template = ' Hello <Name>,

                       How are you?

                  <Date>'

3. Write a program to detect double spaces in a string.

4. Replace the double space from prob. 3 with single spaces.

THANK YOU