

* CHAPTER - 3 : STRINGS

→ string is a data type in Python.
It is sequence of characters enclosed in quotes.
We can primarily, write a string in 3 ways :-

- 1 Single Quoted String → `a = 'shayan'`
- 2 Double Quoted String → `b = "Akhtau"`
- 3 Triple Quoted String → `c = '''Abbedeen'''`

→ String Slicing

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

Consider the following string :

`name = "shayan"` ⇒ length = 6

0	1	2	3	4	5
↓	↓	↓	↓	↓	↓
(-6)	(-5)	(-4)	(-3)	(-2)	(-1)

- The index in a string starts from 0 to length(-1) in Python. In order to slice a string, we use the following syntax :

`sl = name [end_start : end_end]`

first index included

last index excluded

`sl[0:3]` returns "Hear" → characters from 0 to 3

`sl[1:3]` returns "ar" → characters from 1 to 3.

- Negative indices: It can also be used as shown in the figure above -1 corresponds to the (length-1) index, -2 to (length-2).

• Slicing with Skip Value

We can provide a skip value as a part of our slice like this:

```
word = "amazing"
word [1:6:2] → 'mzn'
```

other advanced slicing techniques.

```
word = "amazing"
word [:7] → word [0:7] → 'amazing'
word [0:] → word [0:7] → 'amazing'
```

→ String Functions

Some of mostly used functions to perform operations are:-

1) `len()` function → This function returns the length of the string

```
len("Harvey") → returns 5
```

2) `string.endswith("vey")` → This function tells whether variable ends with ("vey") or not. If string is "Harvey", it returns true for "vey". Since Harvey ends with

3) `string.count("i")` → Counts the total number of occurrence of any character.

4) `string.capitalize()` → This function capitalizes the first character of a given string

5/ `string.find(word)` → This function finds a word and returns the index of first occurrence of that word in the string.

6/ `string.replace(oldword, newword)` - This function replaces the oldword with newword in the entire string.

Escape Sequence characters.

Sequence of characters after backslash '\ ' → escape seq. characters.

Escape sequence characters comprises of more than one characters but represents one character when used within the strings.

Examples `\n`, `\t`, `\'`, `\\` etc
 ↓ ↓ ↓
 newline tab single quote → backslash