

Chapter - 3 Strings

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

1. > Single quoted
2. > Double quoted
3. > Triple quoted

String Slicing

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

Consider the following string :

name = P R A N A V \Rightarrow length = 6

	P	R	A	N	A	V
	0	1	2	3	4	5
	-6	-5	-4	-3	-2	-1

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

sl = name [int_start : int_end]

↙
first index started

↘
last index is not included.

sl [0:3] returns : P R A

sl [1:3] returns : R A

Negative Indices :

Negative Indices can also be used as shown in fig. above. -1 corresponds to the $(\text{length}-1)$ index, -2 to $(\text{length}-2)$

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'
```

Eg :

```
greeting = "Good Morning,"
name = "Pranav" ↗
```

```
c = greeting + name
Print(c)
```

Eg :

```
name = "Pranav"
Print(name[0])
```

output : P

* we can't replace indexing by providing any str.

```
name[3] = "d"
```

error because it's not supported.

eg: `Print(name[0:3])`

out: P R A

eg: `Print(name[0:4])`

out: P R A N

eg: `d = name[1:4:2]`

`Print(d)`

other advanced slicing techniques

`word = "amazing"`

`word[:7] → word[0:7] → 'amazing'`

`word[0:] → word[0:7] → 'amazing'`

* String Functions:

Some of the mostly used functions to perform operations on or manipulate strings are:

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

`len("Pranav") → return 6`

2.) `string.endswith("av")` → This function tells whether the variable string ends with the string "av" or not. If string is "Pranav", it returns true for "av", since 'Pranav' ends with 'av'.

Eg: name = "av"

Print(name.endswith("note"))

⇒ False

3.) String.Count('c') → Counts the total number of occurrence of any character

Eg: a = "My name is Pranav"

Print(a.count("m"))

output: 3

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

Print(a.find("is"))

6.) String.replace(oldword, newword) → This function replaces the oldword in the entire string.

Escape Sequence Character:

Sequence of characters after backslash '\'

escape char

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

Eg: \n , \t , \', \

↓
single quote

→ backslash