Chapter_3 string

String is a data type in python
String is a sequence of characters inclosed in quotes
We can primarily write a string in these that ways

```
1.  Single quoted string     ==>   a  =  'hacksbyte'
2.  Double quoted string     ==>   b  =  "hacksbyte"
3.  Triple quoted string     ==>   c  = ' ' ' hacksbyte' ' '
```

string slicing

A string in python can be sliced for getting a part of the string
Consider the following string

```
Name = "h a c k s b y t e"
        0 1 2 3 4 5 6 7 8      ==> length = 9
        -9-8-7-6-5-4-3-2-1
```

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 [ ind_start : ind_end ]
```

First index included   last index is not included

sl [0:5] returns "hacks" → Characters from 0 to 5
sl [1:5] returns "acks"   →Characters from 1 to 5

Negative index
 negative index can also be used as shown in the figure above -1
characters to the (length -1) index , -2 to (length-2)

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

```
Word = "amaging"
Word [1 : 6 :2 ] → 'mzn'
```

Other advance slicing techniques

```
Word = "amaging"
Word [ : 7] →word [ 0:  7 ] →'amaging
Word [ 0 :] →word [0 : 7] →'amaging'
```

String functions
Some of the mostly used functions to perform operations on or manipulate string are
Len() function this→ function returns the length of the string

Len("hacksbyte") →returns 9

string endswith("byte") this function tells whether the variable string ends with the string "byte" or not if string is " hacksbyte "it returns True For "byte" since hacksbyte endswith byte

String.count("c") → count the total number of occurrence of any
character

String.Capitalize() → this function capitalize the first character of a given string

String.find(word) → this function find a word and returns the index of first occurrence of that word in the string

String.replace(old word, to new word) this function replace the old word whit new word in the enter string

Escape Sequence characters
Sequence of character after backslash "\" → Escape sequence character

Escape sequence character comprises of more thane one character but represents one character when used within the strings

Examples → \n   \t   \'   \\ etc
              ↙   ↙   ↘   ↘
        Newline tab singlequote backslash