Strings

STRING

Strings are sequences of characters. There are numerous **algorithms** for processing strings, including for searching, sorting, comparing and transforming. **Python strings** are "immutable" which means they cannot be changed after they are created .

Strings are arrays of bytes representing Unicode characters.

```
print("Hello")
```

```
print('Hello')
```

Assign String to a Variable

```
a = "Hello"

print(a)
```

Access characters in a string

- In order to access characters from String, use the square brackets [] for slicing along with the index or indices to obtain your characters. Python String index starts from 0.

```
a = "Hello, World!“
```

```
Index:  0 1 2 3 4 5 6  7  8 9 10 11 12
Chars:  H e l l o ,    W o r l  d  !
```

```
print(a[1])
```

- Python allows negative indexing for its sequences.
- The index of -1 refers to the last item, -2 to the second last item and so on.

```
print(a[-1])
```

String Length

To get the length of a string, use the len() function.

```
a = "Hello, World!"
print(len(a))
```

Check String

```
txt = "The best things in life are free!"
print("free" in txt)
```

```
txt = "The best things in life are free!"
print(“if" in txt)
```

```
txt = "The best things in life are free!"
print(“in" in txt)
```

```
txt = "The best things in life are free!"
print("for" in txt)
```

“in” keyword can also be used with if

```
txt = "The best things in life are free!"
if "free" in txt:
  print("Yes, 'free' is present.")
```

Check if NOT

1) txt = "The best things in life are free!"
print("expensive" not in txt)

2) txt = "The best things in life are free!"
print(“good" not in txt)

3) txt = "The best things in life are free!"
print(“things" not in txt)

4) txt = "The best things in life are free!"
print(“if" not in txt)

“not in” keyword can also be used with if

- txt = "The best things in life are free!"
  if "expensive" not in txt:
    print("No, 'expensive' is NOT present.")

Slicing

- b = "Hello, World!"
  print(b[2:5])

- b = "Hello, World!"
  print(b[:5])

- b = "Hello, World!"
  print(b[2:])

- b = "Hello, World!"
  print(b[5:-2])

Slicing

- b = "Hello, World!"
  print(b[:-1])

- b = "Hello, World!"
  print(b[5:-2])

Modify Strings

- Python has a set of built-in methods that you can use on strings.
- upper(), lower(), split(), strip(), replace()
- a = "Hello, World!"
  print(a.upper())
- a = "Hello, World!"
  print(a.lower())
- a = " Hello, World! "
  print(a.strip())
- a = "Hello, World!"
  print(a.replace("H", "J"))
- a = "Hello, World!"
  print(a.split(",")) # returns ['Hello', ' World!']

Splitting

- word = 'CatBatSatFatOr'
- print(word.split('t'))

String Concatenation

- To concatenate, or combine, two strings you can use the + operator.
- a = "Hello"
  b = "World"
  c = a + b
  print(c)

- a = "Hello"
  b = "World"
  c = a + " " + b
  print(c)

Use the len method to print the length of the string.

- x = "Hello World"
- print(---------)

Get the first character of the string txt.

- txt = "Hello World"
- x = ……..

Get the characters from index 2 to index 4 (llo).

- txt = "Hello World"
- x = ……..

Return the string without any whitespace at the beginning or the end.

- txt = " Hello World "
- x = ……

Convert the value of txt to upper case.

- txt = "Hello World"
- txt =

Replace the character H with a J.

- txt = "Hello World"
- txt = txt.(….. , …….)

Insert the correct syntax to add a placeholder for the age parameter

- age = 36
- txt = "My name is John, and I am ……."
- print(txt.format(age))

Summary

- String
- Operation on String.


Thank You