

In []: String -

- String **is** the Sequence of characters
- String **is** built-in data **type** of python
- String **is** the immutable data **type**
- A characters **is** simply a symbol
- 26 Characters

```
In [2]: print(999)
print(type(999))

print("999")
print(type("999"))
```

```
999
<class 'int'>
999
<class 'str'>
```

```
In [11]: my_string = 'hello'
print(my_string)

my_string2 = "hello"
print(my_string2)

my_string3 = '''hello'''
print(my_string3)

my_string4 = """hello"""
print(my_string4)

my_string5 = """hello, welcome to
               the world of the python"""
print(my_string5)
```

```
hello
hello
hello
hello
hello, welcome to
               the world of the python
```

In [18]: *# Unpacking characters*

```
lang = "python"
```

```
a = lang
print(a)
```

```
a,b,c,d,e,f = lang
print(a)
print(d)
print(f)
```

```
python
p
h
n
```

In [26]: *# How to access characters in a string?*

```
lang = "python"
```

```
# total values of length
len(lang)
```

```
# Sting can be indexed with square bracket, indexing starts from zero in python
```

```
# -----> Forward Indexing start from 0,1,2,3.....
print(lang[0])
print(lang[4])
print(lang[5])
```

```
print("=====")
# -----> Backward Indexing start from -1,-2,-3.....
print(lang[-1]) # last value of the item
print(lang[-2])
print(lang[-5])
```

```
p
o
n
=====
n
o
y
```

In [27]: **for** w **in** lang:
 print(w)

```
p
y
t
h
o
n
```

```
In [29]: for w in lang[::-1]:  
         print(w)
```

n
o
h
t
y
p

```
In [ ]: # How to slice a string in python  
  
#syntax  
  
str[start:stop:step]  
#other syntax of slice:  
  
str[start:stop] # items start through stop -1    #- count -1 (len function is un  
str[start:]    ##items start through the rest of values  
str[: stop]    #items from beginning through stop -1  
str[:]         - #a copy of whole values
```

```
In [34]: lang[0:6:1]
```

```
Out[34]: 'python'
```

```
In [38]: lang[0:4]
```

```
Out[38]: 'pyth'
```

```
In [41]: lang[4:]
```

```
Out[41]: 'on'
```

```
In [42]: lang[:2]
```

```
Out[42]: 'py'
```

```
In [43]: lang[:]
```

```
Out[43]: 'python'
```

In [50]: *# split*

```
name = "I love my country"
names = name.split() # by default split " "(space)
print(names)

name2 = "I,love,my,country"
names2 = name2.split(",") # by default split " "(space)
print(names2)

name3 = "I-love-my-country"
names3 = name3.split("-") # by default split " "(space)
print(names3)
```

```
['I', 'love', 'my', 'country']
['I', 'love', 'my', 'country']
['I', 'love', 'my', 'country']
```

In [51]: names3

Out[51]: ['I', 'love', 'my', 'country']

In [56]: *# join*

```
print(''.join(name))
print(''.join(name))
```

```
I love my country
I love my country
```

In [62]: *# How to change or delete in string?*

```
my_string = "python"
#my_string[0] = "m"
#del my_string[0]
# delete variable need to deleted
del my_string
```

In [64]: my_string = "python"

```
my_string.replace('p','m')
```

Out[64]: 'mython'

In [66]: *# Python Oerations*

```
a = "hello"
b = "world"

print(a + b)
print(a + " " + b)
```

helloworld
hello world

In [70]: `print("999" + "9")`

9999

In [71]: `print("555" + "555")`

555555

In [72]: `print(eval("555") + eval("555"))`

1110

In [75]: `print(a * 10)`

hellohellohellohellohellohellohellohellohello

In [76]: `print(" Amit " * 2)`

Amit Amit

In [77]: `a + b`

Out[77]: 'helloworld'

In [78]: *# membership operater*

```
in , not in
```

Out[78]: 'python'

In [79]: `for w in lang:`
`print(w)`

p
y
t
h
o
n

```
In [85]: str1 = "hello world"
str2 = "hello"

print("hello" in str1 )
print("hello1" not in str1 )
```

True
True

```
In [86]: "hello" in str2
```

Out[86]: True

```
In [87]: print("hello" == "hello")
```

True

```
In [6]: # String Formatting

# %s --> string
# %d ---> numeric
# %f --> floating

values = "World"

print("Hello %s" %(values,))
print("Hello %d" %1000)
```

Hello World
Hello 1000

```
In [8]: # 2-
print("Hello {} {} {}".format(values,99,10.05))
```

Hello World 99 10.05

```
In [11]: # 3 docstring
print(f"Hello {values}")
print(f"Hello {99}")
print(f"Hello {99} {values}")
```

Hello World
Hello 99
Hello 99 World

```
In [14]: print(f"Hello {values}")
print(f"Hello {99}")
print("=====")
print(f"Hello {99} {values}")
```

```
Hello World
Hello 99
=====
Hello 99 World
```

```
In [16]: print(f"Hello \n{values}")
```

```
Hello
World
```

```
In [17]: print(f"Hello \r{values}")
```

```
World
```

```
In [19]: print('I\'there')
```

```
I'there
```

```
In [22]: print(f"Hello \t\t{values}")
```

```
Hello          World
```

Common python string methods

```
In [24]: s= "heLLo woRLD"
print(s.capitalize())
```

```
Hello world
```

```
In [25]: print(s.title())
```

```
Hello World
```

```
In [26]: print(s.upper())
```

```
HELLO WORLD
```

```
In [27]: print(s.lower())
```

```
hello world
```

In [31]: `s1 = "I Live in Mumbai"`

```
print(s1.lower())  
print(s1.upper())
```

```
i live in mumbai  
I LIVE IN MUMBAI
```

In [32]: `print("Hello World".replace("World", "Class"))`

```
Hello Class
```

In [36]: `print(" i have added the lots of space ".strip())`

```
i have added the lots of space
```

In [39]: `var = 'Python new Challenges'`

```
print(var.count("e"))  
print(var.count("l"))  
print(var.count("new"))
```

```
3  
2  
1
```

In [41]: `# endswith
print(var.endswith("es"))
print(var.endswith("ese"))`

```
True  
False
```

In [46]: `s1 = "I Live in Mumbai"
print(s1.find("i")) # index of thw first characters
print(s1.find("I")) # index of the first characters`

```
3  
0
```

In []: `# Q: what is the difference between count and find?`


```
In [54]: c = "PythonDatatypes1"
         d = "99"
         print(d.isnumeric())
         print(c.isalpha())
         print(c.isalnum())
```

```
True
False
True
```

```
In [56]: print(c.isupper())
         print(c.islower())
```

```
False
False
```

```
In [57]: s1 = "I Live in Mumbai"

         s1.split()
```

```
Out[57]: ['I', 'Live', 'in', 'Mumbai']
```

```
In [58]: s1 = "I Live in Mumbai"

         s1.startswith("I")
```

```
Out[58]: True
```

```
In [59]: s1 = "I Live in Mumbai"
         print(len(s1))
```

```
16
```

```
In [ ]: # Concatenate the [python,4,data,analysis] to a single string python 4 data an
        # what is the difference between find and count
        # what is the length of "I am indian by birth"
        # what will be the 9th index value for name of the variable "Pythondatatypes"
        # what is the difference between startswith and endswith?
```