

# String

```
In [2]: str1 = 'HELLO PYTHON'  
print(str1)
```

```
HELLO PYTHON
```

```
In [7]: mystr = 'Hello world' #single quotes  
print(mystr)
```

```
Hello world
```

```
In [9]: mystr = "Hello world" #double quotes  
print(mystr)
```

```
Hello world
```

```
In [10]: mystr = '''Hello  
str'''  
print(mystr)
```

```
Hello  
str
```

```
In [12]: mystr=('Python '  
           'programming '  
           'Language')  
print(mystr)
```

```
Python programming Language
```

```
In [14]: mystr = 'hello '  
mystr  = mystr * 3  
mystr
```

```
Out[14]: 'hello hello hello '
```

```
In [15]: len(mystr)
```

```
Out[15]: 18
```

# String Indexing

```
In [16]: str1
```

```
Out[16]: 'HELLO PYTHON'
```

```
In [17]: str1[0]
```

```
Out[17]: 'H'
```

```
In [20]: str1[len(str1)-1]
```

```
Out[20]: 'N'
```

```
In [21]: str1[-1]
```

```
Out[21]: 'N'
```

```
In [22]: str1[5]
```

```
Out[22]: '
```

```
In [23]: str1[7]
```

```
Out[23]: 'Y'
```

## String Slicing

```
In [24]: str1[0:5]
```

```
Out[24]: 'HELLO'
```

```
In [25]: str1[6:12]
```

```
Out[25]: 'PYTHON'
```

```
In [28]: str1[-4:]
```

```
Out[28]: 'THON'
```

```
In [27]: str1[-6:]
```

```
Out[27]: 'PYTHON'
```

```
In [29]: str1[:4]
```

```
Out[29]: 'HELL'
```

```
In [30]: str1[:6]
```

```
Out[30]: 'HELLO '
```

```
In [22]: language = 'python'  
first_three = language[0:3]  
first_three
```

```
Out[22]: 'pyt'
```

```
In [23]: last_three = language[3:]  
last_three
```

```
Out[23]: 'hon'
```

```
In [24]: #skipping character while splitting python string
language = 'python'
pto = language[0:6:2]
print(pto)
```

```
pto
```

## update & delete String

```
In [31]: str1
```

```
Out[31]: 'HELLO PYTHON'
```

```
In [33]: str1[0:5] = 'puio'
```

```
-----  
TypeError                                     Traceback (most recent call last)  
Cell In[33], line 1  
----> 1 str1[0:5] = 'puio'  
  
TypeError: 'str' object does not support item assignment
```

```
In [34]: del str1
print(str1)
```

```
-----  
NameError                                     Traceback (most recent call last)  
Cell In[34], line 2  
      1 del str1  
----> 2 print(str1)  
  
NameError: name 'str1' is not defined
```

## String concatenation

```
In [36]: s1 = 'Hello '
s2 = 'pinky'
s3 = s1 + s2
print(s3)
```

```
Hello pinky
```

```
In [9]: first_name = 'Abhishek'
last_name = 'sharma'
space = ' '
full_name = first_name + space + last_name
print(full_name)
```

```
Abhishek sharma
```

```
In [10]: print(len(first_name))
```

```
8
```

```
In [11]: print(len(last_name))
```

```
6
```

```
In [12]: print(len(first_name) > len(last_name))
```

```
True
```

```
In [13]: print(len(full_name))
```

```
15
```

```
In [1]: #Single Line comment  
letter = 'p'  
print(letter)
```

```
p
```

```
In [2]: print(len(letter))
```

```
1
```

```
In [3]: greeting = 'Good morning!'  
print('good morning')
```

```
good morning
```

```
In [4]: print(len(greeting))
```

```
13
```

```
In [6]: sentence = "Nice to meet you"  
print(sentence)
```

```
Nice to meet you
```

```
In [7]: #multiline string  
str1='''I'm a student,completed my btech recently .  
I'm very excited to learn new facts.  
I love travelling to explore the world'''  
print(str1)
```

```
I'm a student,completed my btech recently .
```

```
I'm very excited to learn new facts.
```

```
I love travelling to explore the world
```

```
In [14]: ## Unpacking characters
```

```
language = 'Python'  
a,b,c,d,e,f=language  
print(a)  
print(b)  
print(c)  
print(d)  
print(e)  
print(f)
```

```
P  
y  
t  
h  
o  
n
```

```
In [15]: #Accessing characters in strings by index
```

```
In [16]: language = 'Python'  
first_letter = language[0]  
print(first_letter)
```

```
P
```

```
In [17]: second_letter = language[1]  
print(second_letter)
```

```
y
```

```
In [18]: last_letter=language[-1]  
print(last_letter)
```

```
n
```

```
In [20]: #backward indexing is used to get the char from last  
language = 'Python'  
last_letter = language[-1]  
print(last_letter)
```

```
n
```

```
In [21]: sec_last_letter = language[-2]  
print(sec_last_letter)
```

```
o
```

```
In [31]: # Escaping sequence  
print('I hope everyone enjoying the class.\nDont you')
```

```
I hope everyone enjoying the class.  
Dont you
```

```
In [32]: print('Days\tTopics\tExercises')
```

```
Days      Topics    Exercises
```

```
In [35]: print('Day 1\t3\t5')
```

```
Day 1    3        5
```

```
In [36]: print('Day 2\t3\t5')
```

```
Day 2    3        5
```

```
In [37]: print('This is a back slash symbol(\\)')
```

```
This is a back slash symbol(\\)
```

```
In [40]: print('In every programming language starts with \
"Hello,world!"')
```

```
In every programming language starts with "Hello,world!"
```

## String Methods

```
In [3]: #capitalize(): converts the first character the string to capital
challenge = 'thirty days of python'
print(challenge.capitalize())
```

```
Thirty days of python
```

```
In [4]: '''count(): returns occurences of substring in string
count(substring,start=..,end = ,,''
challenge = 'thirty days of python'
print(challenge.count('y'))
```

```
3
```

```
In [5]: print(challenge.count('y',7,14))
```

```
1
```

```
In [6]: print(challenge.count("th"))
```

```
2
```

```
In [8]: #endswith() : checks if a string ends with specified ending
print(challenge.endswith('on'))
print(challenge.endswith("tion"))
```

```
True
```

```
False
```

```
In [9]: #expandtabs(): replaces tab character with spaces ,default tabspace is 8 it takes ta
challenge = 'thirty\tdays\tto\tpython'
print(challenge.expandtabs())
print(challenge.expandtabs(10))
```

```
thirty    days      of          python
thirty    days      of          python
```

```
In [11]: #find(): returns the index of first occurrence of substring
print(challenge.find('y'))
print(challenge.find('th'))
```

```
5
```

```
0
```

```
In [12]: #format() formats the string into nicer/desired output
first_name ='Rohit'
last_name = 'sharma'
job = 'cricketer'
country = 'india'
```

```
sentence = 'He is {} {},a {} from {}'.format(first_name,last_name,job,country)
print(sentence)
```

He is Rohit sharma,a cricketer from india.

```
In [15]: radius = 10
pi = 3.14
area = pi * radius **2
result = 'the area of circle with radius {} is {}'.format(radius,area)
print(result)
```

the area of circle with radius 10 is 314.0

```
In [16]: #index(): Returns the index of substring
print(challenge.index('y'))
print(challenge.index('th'))
```

5  
0

```
In [17]: #isalnum(): checks alphanumeric character
challenge = 'ThirtyDaysPython'
print(challenge.isalnum())
```

True

```
In [18]: challenge = '30dayspython'
print(challenge.isalnum())
```

True

```
In [24]: challenge = 'thirty days of python'
print(challenge.isalnum())
```

False

```
In [28]: #isalpha(): checks if all characters are alphabets
challenge = 'thirtydaysofpython'
print(challenge.isalpha())
```

True

```
In [29]: num = '123'
print(num.isalpha())
```

False

```
In [31]: #isdecimal(): checks decimal characters
num = '10'
print(num.isdecimal())
num = '10.5'
print(num.isdecimal())
```

True  
False

```
In [32]: #isidentifier(): checks for valid identifier
challenge = '30Daysofpython'
print(challenge.isidentifier())
```

```
challenge = 'thirty_days'  
print(challenge.isidentifier())
```

False

True

In [33]: *#islower() : checks if all alphabets are in lowercase*

```
challenge = 'python'  
print(challenge.islower())  
challenge = 'Python'  
print(challenge.islower())
```

True

False

In [34]: *#isupper() : checks if all characters are in uppercase*

```
challenge = 'Python'  
print(challenge.isupper())  
challenge = 'PYTHON'  
print(challenge.isupper())
```

False

True

In [35]: *#isnumeric(): checks numeric characters*

```
num = '10'  
print(num.isnumeric())  
print('ten'.isnumeric())
```

True

False

In [36]: *#join(): returns a concatenated string*

```
web_tech = ['HTML', 'CSS', 'JAVASCRIPT']  
res = '#,'.join(web_tech)  
print(res)
```

HTML#,CSS#,JAVASCRIPT

In [38]: *#strip(): Removes both Leading and trailing whitespaces removed*

```
challenge = ' thirty days of python '  
print(challenge.strip('y'))
```

thirty days of python

In [39]: *#replace(): Replaces substring inside*

```
print(challenge.replace('python', 'coding'))
```

thirty days of coding

In [40]: *#split(): splits string from left*

```
challenge = 'thirty days'  
print(challenge.split())
```

['thirty', 'days']

In [41]: *#title(): returns a title cased String*

```
challenge = 'thirty days work'  
print(challenge.title())
```

## Thirty Days Work

```
In [43]: #swapcase(): it swaps the string case i.e. if it is in lower it converts it into up
ch = 'ThirTy daYs'
print(ch.swapcase())
```

tHIRTy DAyS

```
In [45]: #startswith(): checks if string starts with specified String
challenge = 'thirty days of python'
print(challenge.startswith('th'))
challenge = '30days'
print(challenge.startswith('th'))
```

True

False