

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 occurrences 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 tabsize is 8 it takes ta
challenge = 'thirty\tdays\tof\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