How to read the strings

In [1]:
```python
string1='python'    # single quote
string1
```

Out[1]: 'python'

In [2]:
```python
string2="python"   # double quotes
string2
```

Out[2]: 'python'

In [ ]:
```python
### Triple quotes

# Doc string is used to say some information about your python code
```

In [ ]:
```python
"""
im creating a hello function
arguments: None
return:   None
"""
def hello():
    print("good moring")
```

In [ ]:
```python
'hello python'  # I want highlite the python
```

In [6]:
```python
string3='hello "python"'
print(string3)
```
hello "python"

In [7]:
```python
string4="hello 'python'"
print(string4)
```
hello 'python'

- type
- len
- max
- min

type:

In [8]:
```python
string1
```

Out[8]: 'python'

```
In [9]: type(string1)    # str
```

Out[9]: str

len

```
In [10]: len(string1)
```

Out[10]: 6

max-min

```
In [11]: string1='pP'
         max(string1)    # python

         # ASCII
         # 'A': 65      'a':97
```

Out[11]: 'p'

ord-chr

```
In [12]: ord('p')  # It will provide ascii value of char
```

Out[12]: 112

```
In [13]: ord('P')
```

Out[13]: 80

```
In [16]: string1='python'
         max(string1),min(string1)
```

Out[16]: ('y', 'h')

```
In [15]: ord('p'),ord('y'),ord('t'),ord('h'),ord('o'),ord('n')
```

Out[15]: (112, 121, 116, 104, 111, 110)

```
In [22]: chr(112),chr(121),chr(116),chr(104),chr(111),chr(110)
```

Out[22]: ('p', 'y', 't', 'h', 'o', 'n')

```
In [25]: for i in range(len('python')):
             print(i)

         0
         1
         2
         3
         4
         5
```

```
In [ ]:  # I want print p y t h o n
```

in

```
In [27]:  string1='python'

          'p' in string1
          'y' in string1
          't' in string1
          'h' in string1
          'o' in string1
          'n' in string1

          #i in string1
```

```
Out[27]:  True
```

```
In [28]:  for i in string1:
              print(i)
```

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

- range() : you need to provide number inside the range
- in : is used only for strings

if you want print the letters using for loop go for in operator

```
In [29]:  print(ord('p'))
          print(ord('y'))
          print(ord('t'))
          print(ord('h'))
          print(ord('o'))
          print(ord('n'))

          print(ord(i))
```

```
112
121
116
104
111
110
```

```python
In [31]: for i in string1:
             print("the ascii value of {} is {}".format(i,ord(i)))
             # The ascii value of p is 112
```

```
the ascii value of p is 112
the ascii value of y is 121
the ascii value of t is 116
the ascii value of h is 104
the ascii value of o is 111
the ascii value of n is 110
```

```python
In [ ]: # Ascii value of A to Z
```

```python
In [32]: for i in 'ABCDEFGHIJKLMNOPQRSTUVWXYZ':
             print("the ascii value of {} is {}".format(i,ord(i)))
```

```
the ascii value of A is 65
the ascii value of B is 66
the ascii value of C is 67
the ascii value of D is 68
the ascii value of E is 69
the ascii value of F is 70
the ascii value of G is 71
the ascii value of H is 72
the ascii value of I is 73
the ascii value of J is 74
the ascii value of K is 75
the ascii value of L is 76
the ascii value of M is 77
the ascii value of N is 78
the ascii value of O is 79
the ascii value of P is 80
the ascii value of Q is 81
the ascii value of R is 82
the ascii value of S is 83
the ascii value of T is 84
the ascii value of U is 85
the ascii value of V is 86
the ascii value of W is 87
the ascii value of X is 88
the ascii value of Y is 89
the ascii value of Z is 90
```

```python
In [33]: # package_name: string
         import string
```

```
In [34]: dir(string)
```

```
Out[34]: ['Formatter',
          'Template',
          '_ChainMap',
          '__all__',
          '__builtins__',
          '__cached__',
          '__doc__',
          '__file__',
          '__loader__',
          '__name__',
          '__package__',
          '__spec__',
          '_re',
          '_sentinel_dict',
          '_string',
          'ascii_letters',
          'ascii_lowercase',
          'ascii_uppercase',
          'capwords',
          'digits',
          'hexdigits',
          'octdigits',
          'printable',
          'punctuation',
          'whitespace']
```

```
In [35]: # see the output of : ascii_uppercase
         string.ascii_uppercase
```

```
Out[35]: 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
```

```
In [36]: for i in string.ascii_uppercase:
             print("the ascii value of {} is {}".format(i,ord(i)))
```

```
the ascii value of A is 65
the ascii value of B is 66
the ascii value of C is 67
the ascii value of D is 68
the ascii value of E is 69
the ascii value of F is 70
the ascii value of G is 71
the ascii value of H is 72
the ascii value of I is 73
the ascii value of J is 74
the ascii value of K is 75
the ascii value of L is 76
the ascii value of M is 77
the ascii value of N is 78
the ascii value of O is 79
the ascii value of P is 80
the ascii value of Q is 81
the ascii value of R is 82
the ascii value of S is 83
the ascii value of T is 84
the ascii value of U is 85
the ascii value of V is 86
the ascii value of W is 87
the ascii value of X is 88
the ascii value of Y is 89
the ascii value of Z is 90
```

```
In [37]: for i in string.ascii_lowercase:
             print("the ascii value of {} is {}".format(i,ord(i)))
```

```
the ascii value of a is 97
the ascii value of b is 98
the ascii value of c is 99
the ascii value of d is 100
the ascii value of e is 101
the ascii value of f is 102
the ascii value of g is 103
the ascii value of h is 104
the ascii value of i is 105
the ascii value of j is 106
the ascii value of k is 107
the ascii value of l is 108
the ascii value of m is 109
the ascii value of n is 110
the ascii value of o is 111
the ascii value of p is 112
the ascii value of q is 113
the ascii value of r is 114
the ascii value of s is 115
the ascii value of t is 116
the ascii value of u is 117
the ascii value of v is 118
the ascii value of w is 119
the ascii value of x is 120
the ascii value of y is 121
the ascii value of z is 122
```

In [38]:
```python
for i in string.punctuation:
    print("the ascii value of {} is {}".format(i,ord(i)))
```

```
the ascii value of ! is 33
the ascii value of " is 34
the ascii value of # is 35
the ascii value of $ is 36
the ascii value of % is 37
the ascii value of & is 38
the ascii value of ' is 39
the ascii value of ( is 40
the ascii value of ) is 41
the ascii value of * is 42
the ascii value of + is 43
the ascii value of , is 44
the ascii value of - is 45
the ascii value of . is 46
the ascii value of / is 47
the ascii value of : is 58
the ascii value of ; is 59
the ascii value of < is 60
the ascii value of = is 61
the ascii value of > is 62
the ascii value of ? is 63
the ascii value of @ is 64
the ascii value of [ is 91
the ascii value of \ is 92
the ascii value of ] is 93
the ascii value of ^ is 94
the ascii value of _ is 95
the ascii value of ` is 96
the ascii value of { is 123
the ascii value of | is 124
the ascii value of } is 125
the ascii value of ~ is 126
```

In [39]:
```python
# what is the start and end of ascii numbers?

ord('a')
```

Out[39]: 97

```
In [49]:  for i in range(983,1000):
              print(i,chr(i))

          # start with 33
          # end with 126
          # ascii:
```

```
983 ҷ
984 Ọ
985 ọ
986 Ϛ
987 ϛ
988 Ϝ
989 ϝ
990 Ϟ
991 ϟ
992 Ϡ
993 ϡ
994 Ш
995 ш
996 Ч
997 ч
998 Һ
999 ҙ
```

```
In [50]:  string.ascii_letters
```

Out[50]: 'abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ'

```
In [51]:  string.printable

          # digts
          # lower
          # upp
          # punct
```

Out[51]: '0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ!"#$%&\'()*
          +,-./:;<=>?@[\\]^_`{|}~ \t\n\r\x0b\x0c'

```python
In [54]:  # WAP ask the user find number of 'a' letters in a given strinh
          # string='hai how are you and how do you do'
          # ans:3

          # count=0
          # first iterate the string using in and for loop
          # print each letter ==== > i
          # apply the if condition  i=='a'
          #                         count+=1
          string='hai how are you and how do you do'
          count=0
          for i in string:
              #print(i)
              if i=='a':
                  count=count+1

          print(count)

          # step-1:  i='h'  'h'=='a'  F
          # step-2:  i='a'   'a'=='a' T === > count=1

3
```

```python
In [55]:  # WAP count the number of vowels in a given string
          # string='hai how are you'
          # 7

          string='hai how are you'
          count=0
          for i in string:
              #print(i)
              if i in 'aeiou':
                  count=count+1

          print(count)

7
```

```python
In [60]:  # WAP count the number of unique vowels in a given string
          # ans:5
          string1=''
          for i in 'python':
              string1=string1+i

          print(string1)

python
```

```
In [61]: string='hai how are you'
         str1=''
         count=0
         for i in string:
             if i in 'aeiou':
                 count=count+1

         print(count)
```

7

concatenation

```
In [62]: str1='hai'
         str2='how'
         str1+str2
```

Out[62]: 'haihow'

```
In [ ]: str1-str2 #
        str1*str2 #
        str1/str2 #
```

```
In [66]: str1-str2
```

```
---------------------------------------------------------------------
-
TypeError                                 Traceback (most recent call las
t)
Cell In[66], line 1
----> 1 str1-str2

TypeError: unsupported operand type(s) for -: 'str' and 'str'
```

```
In [68]: #can't multiply sequence by non-int of type 'str'

         3*str1
```

Out[68]: 'haihaihai'

```
In [69]: str1+str1+str1
```

Out[69]: 'haihaihai'

```
In [ ]: - how to read

        - single/double/triple

        - type

        - len

        - in (how to iterate through for loop)

        - max

        - min

        - concatenation
```

index

```
In [70]: string1='python'  # 6 letters
```

```
In [ ]: p   y   t   h   o   n
        0   1   2   3   4   5
```

```
In [75]: string1[0],string1[1],string1[2],string1[3],string1[4],string1[5]

         string1[i]
```

```
Out[75]: ('p', 'y', 't', 'h', 'o', 'n')
```

```
In [78]: for i in range(5):
             print(string1[i])
         #i=0 ====== string1[0]===='p'
         #i=1======= string1[1]===='y'

         # i ======= will give index
         # string[i] ======= letters
```

```
p
y
t
h
o
```

```
In [81]: string1='python'

         # i want to print letters using in opertor
         # i want to print letters using range operator
         for i in string1:
             print(i)

         for i in range(len(string1)):
             print(i,string1[i])
```

```
p
y
t
h
o
n
0 p
1 y
2 t
3 h
4 o
5 n
```

```
In [83]: name='python class'

         for i in name:
             print("The index no of '{}' is {}".format(name[i],i))

             # i='p'   name['p'],'p'

         # if you want print only letter : in
         # if you want print index: range
         # if you want print index as well as letter: range
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[83], line 4
      1 name='python class'
      3 for i in name:
----> 4     print("The index no of '{}' is {}".format(name[i],i))

TypeError: string indices must be integers, not 'str'
```

```
In [ ]:
```