Strings

- A string is a collection of characters(special characters,numbers,alphabets and float values).
- An empty string is a string that has 0 characters.
- String is immutable(we can't change).

String Slicing

In [1]:

```
s = "python programming"
len(s)
```

Out[1]:

```
18
```

In [4]:

```
print(s.index('p'))
print(s.index('g'))
```

```
0
10
```

In [7]:

```
s = "python program"
print(s.index('m'))
print(len(s))
s.index(' ')
```

```
13
14
```

Out[7]:

```
6
```

In [10]:

```
s = ' '
len(s)
```

Out[10]:

```
1
```

In [9]:

```
s = ''
len(s)
```

Out[9]:

```
0
```

In [24]:

```
s = "python program"
print(s[0:])  #s[starting position:end position:increment|decrement]
print(s[0:6])
print(s[-1])
print(s[-1::-1])
print(s[len(s)//2])
print(len(s)/2)
```

```
python program
python
m
margorp nohtyp
p
7.0
```

In [25]:

```
s[-1::-1]
```

Out[25]:

```
'margorp nohtyp'
```

In [26]:

```
s[::-1]
```

Out[26]:

```
'margorp nohtyp'
```

In [27]:

```
s
```

Out[27]:

```
'python program'
```

In [42]:

```
s[0]
s[0] = 'k'
print(s)
# s['program'] = 'world' #
# s
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-42-339e30c42673> in <module>
      1 s[0]
----> 2 s[0] = 'k'
      3 print(s)
      4 # s['program'] = 'world' #
      5 # s

TypeError: 'str' object does not support item assignment
```

In [39]:

```
lst = ['apple','banana','papaya']
print(len(lst))
print(lst[0])
lst[0] = 'grapes'
lst
```

```
3
apple
```

Out[39]:

```
['grapes', 'banana', 'papaya']
```

In [45]:

```
print(dir(str))
```

```
['__add__', '__class__', '__contains__', '__delattr__', '__dir__', '__doc_
_', '__eq__', '__format__', '__ge__', '__getattribute__', '__getitem__', '__
getnewargs__', '__gt__', '__hash__', '__init__', '__init_subclass__', '__ite
r__', '__le__', '__len__', '__lt__', '__mod__', '__mul__', '__ne__', '__new_
_', '__reduce__', '__reduce_ex__', '__repr__', '__rmod__', '__rmul__', '__se
tattr__', '__sizeof__', '__str__', '__subclasshook__', 'capitalize', 'casefo
ld', 'center', 'count', 'encode', 'endswith', 'expandtabs', 'find', 'forma
t', 'format_map', 'index', 'isalnum', 'isalpha', 'isascii', 'isdecimal', 'is
digit', 'isidentifier', 'islower', 'isnumeric', 'isprintable', 'isspace', 'i
stitle', 'isupper', 'join', 'ljust', 'lower', 'lstrip', 'maketrans', 'partit
ion', 'replace', 'rfind', 'rindex', 'rjust', 'rpartition', 'rsplit', 'rstri
p', 'split', 'splitlines', 'startswith', 'strip', 'swapcase', 'title', 'tran
slate', 'upper', 'zfill']
```

capitalize()

- Converts the first character to upper case

In [46]:

```
s = 'apssdc'
s.capitalize()
```

Out[46]:

```
'Apssdc'
```

In [47]:

```
s = 'APSSDC'
s.capitalize()
```

Out[47]:

```
'Apssdc'
```

casefold()

- Converts string into lower case

In [48]:

```
s = 'Hello World'
s.casefold()
```

Out[48]:

```
'hello world'
```

In [49]:

```
s = 'Hello WORLD'
s.casefold()
```

Out[49]:

```
'hello world'
```

center()

In [51]:

```
s = 'python'
s.center(10)
```

Out[51]:

```
'  python  '
```

In [52]:

```
s = 'python'
s.center(10,'@')
```

Out[52]:

'@@python@@'

In [54]:

```
s = 'apssdcg'
s.center(10,'@')
```

Out[54]:

'@apssdcg@@'

count()

In [56]:

```
s = 'python program'
print(s.count('p'))
print(s.count('k'))
```

```
2
0
```

In [57]:

```
s = 'python program started on Aug 13'
s.count('13')
```

Out[57]:

1

find()

In [61]:

```
s = 'python program'
print(s.find('a'))
print(s.find('k'))
```

```
12
-1
```

isalnum()

In [65]:

```
s = 'pythonprogram123'
s.isalnum()
```

Out[65]:

```
True
```

In [63]:

```
s = 'pythonprogram'
s.isalnum()
```

Out[63]:

```
True
```

In [66]:

```
s = '1234'
s.isalnum()
```

Out[66]:

```
True
```

isalpha()

In [67]:

```
s = 'python program'
s.isalpha()
```

Out[67]:

```
False
```

In [68]:

```
s = 'pythonprogram'
s.isalpha()
```

Out[68]:

```
True
```

In [69]:

```
s = 'pythonprogram123'
s.isalpha()
```

Out[69]:

```
False
```

Task1

Take a string 'python programming by python platforms'.Find how many times 'python' repeats in the given string

Task2

Take a string 'python programming by python platforms'.Print given string without spaces

Task3

Take a string 'python programming by python platforms'. Print the first letter of the word into uppercase

Task4

Take a string 'python programming by python platforms'. The spaces has to be replaced by given special characters

In [73]:

```
# Given number is prime or not
def PrimeorNot(n):
    c = 0
    for i in range(1,n+1): # i=1, i=2,i=3
        if n%i == 0: #3%1=0, 3%2=1, 3%3=0
            c += 1 #c=1+1=2
    if c==2:
        print(n,'is prime')
    else:
        print(n,'is not prime')
n = int(input())
PrimeorNot(n)

```

```
6
6 is not prime
```

In [76]:

```
def Primerange(n):
    for i in range(1,n+1):
        c = 0
        for j in range(1,i+1):
            if i%j == 0:
                c += 1
        if c == 2:
            print(i,end=" ")
n = int(input())
Primerange(n)
```

```
20
2 3 5 7 11 13 17 19
```

In [ ]:

```

```