In [5]:
```
s = "Hello world"  # finding the middle charecter
t = len(s)//2
s[t]  # s[5]
```

Out[5]: ' '

In [6]:
```
s[len(s)//2]
```

Out[6]: ' '

In [8]:
```
2.4  #floor value >2
2.4 #ceiling value>3
4//2
```

Out[8]: 2

In [9]:
```
s = "Hello123"
len(s)
```

Out[9]: 8

In [12]:
```
s[len(s)//2]  #s[4]
```

Out[12]: 'o'

In [14]:
```
s[(len(s)//2)-1]+s[len(s)//2]  #s[3]
```

Out[14]: 'lo'

In [15]:
```
s[-1:-8:-1]  # -1,-2,-3,-4
```

Out[15]: '321olle'

In [21]:
```
s[len(s):0:-1]
```

Out[21]: '321olle'

In [22]:
```
s[::-1]
```

Out[22]: '321olleH'

In [18]:
```
for i in range(10,1,-1):
    print(i,end= " ")
```

10 9 8 7 6 5 4 3 2

In [40]:
```
s = input() # dad, madam, 1234321
#t= s[::-1]
if s==s[::-1]: # s==t
    print(s,"is a palindrome")
else:
    print(s,"is not a palindrome")
```

```
dad
dad is a palindrome
```

In [26]:
```
s[::-1]
```

Out[26]: 'malayalam'

In [38]:
```
# take the input in the interger format from user and check whether it is
# palindrome or not and the output must in interger format

n = 1234321  #str(n)
#print(type(n))
t = str(n)  # str(1234321) ==>'1234321'
if t==t[::-1]:
    print("n is palindrome")
print(type(n))
```

```
n is palindrome
<class 'int'>
```

String Methods

In [42]:
```
type(s)
dir(s)
```

Out[42]: str

In [41]:
```
print(dir(str))  #dir(list) #dir(dict)
```

```
['__add__', '__class__', '__contains__', '__delattr__', '__dir__', '__doc__',
'__eq__', '__format__', '__ge__', '__getattribute__', '__getitem__', '__getnewa
rgs__', '__gt__', '__hash__', '__init__', '__init_subclass__', '__iter__', '__l
e__', '__len__', '__lt__', '__mod__', '__mul__', '__ne__', '__new__', '__reduce
__', '__reduce_ex__', '__repr__', '__rmod__', '__rmul__', '__setattr__', '__siz
eof__', '__str__', '__subclasshook__', 'capitalize', 'casefold', 'center', 'cou
nt', 'encode', 'endswith', 'expandtabs', 'find', 'format', 'format_map', 'inde
x', 'isalnum', 'isalpha', 'isascii', 'isdecimal', 'isdigit', 'isidentifier', 'i
slower', 'isnumeric', 'isprintable', 'isspace', 'istitle', 'isupper', 'join',
'ljust', 'lower', 'lstrip', 'maketrans', 'partition', 'replace', 'rfind', 'rind
ex', 'rjust', 'rpartition', 'rsplit', 'rstrip', 'split', 'splitlines', 'startsw
ith', 'strip', 'swapcase', 'title', 'translate', 'upper', 'zfill']
```

In [57]:
```
s = "python programming1212"  # captialize
t=s.capitalize()

```

In [58]:
```
s.count("p")
```

Out[58]: 2

In [59]:
```
s.count("1")
```

Out[59]: 2

In [62]:
```
s.count("12")
```

Out[62]: 2

In [73]:
```
s.center(26,"A")   # ###python programming1212###

```

Out[73]: 'AApython programming1212AA'

In [68]:
```
len(s)
```

Out[68]: 22

In [75]:
```
#AApython programming1212AA # 25
```

In [76]:
```
s[10]
```

Out[76]: 'g'

In [78]:
```
s.index("p")
```

Out[78]: 0

In [79]:
```
s= "1234"
s.isdigit()
```

Out[79]: True

In [80]:
```
s = "Python 123"
s.isdigit()
```

...

In [84]:
```
for i in range(1,5):
    if False:
        print(i+10)
    print(i)
```

...

In [85]:
```
for i in s:  # python 123  # PYTHON 123
    if i.isdigit():  # if True:  # if i==5
        print(i)
```

```
1
2
3
```

In [87]:
```
s.lower()  #"Python 123"
```

Out[87]: 'python 123'

In [88]:
```
s.upper()
```

Out[88]: 'PYTHON 123'

In [89]:
```
s
```

Out[89]: 'Python 123'

In [91]:
```
s.isalpha()
s= "Python"
s.isalpha()
```

Out[91]: True

In [94]:
```
s= "Python123"
s.isalnum()
```

Out[94]: True

In [95]:
```
s= "    Python programming      " # to remove the spaces
print(s.lstrip())
print(s.rstrip())
print(s.strip())
```

...

In [99]:
```
s=s.strip()
s.replace(" ","@")
```

Out[99]: 'Python@programming'

In [101]:
```
s.replace(" ","")
```

Out[101]: 'Pythonprogramming'

In [104]:
```
t = s.title()

t.istitle()
```

Out[104]: True

In [113]:
```
print(s)
t = s.split()
print(t)
s.split("a")
```

...

In [114]:
```
"@".join(s)
```

Out[114]: 'P@y@t@h@o@n@ @p@r@o@g@r@a@m@m@i@n@g'

In [117]:
```
t =  s.split()
t
```

Out[117]: ['Python', 'programming']

In [118]:
```
"@".join(t)
```

Out[118]: 'Python@programming'

In [122]:
```
s.index("g")
```

Out[122]: 10

In [124]:
```
len(s)
```

Out[124]: 18

In [123]:
```
for i in s:
    print(i,end = " ")
```

```
P y t h o n   p r o g r a m m i n g
```

In [131]:
```
for i in range(0,len(s)):  # for i in range(0,18)
    #print(i, end= " ") # 0,1,2,3,...
    print(s[i],end = " ")  # s[0],s[1],s[2]
```

```
P y t h o n   p r o g r a m m i n g
```

In [132]:

```
for i in range(len(s)):
    if s[i] =="g":
        print(i)
```

```
10
17
```

In [ ]:

```

```