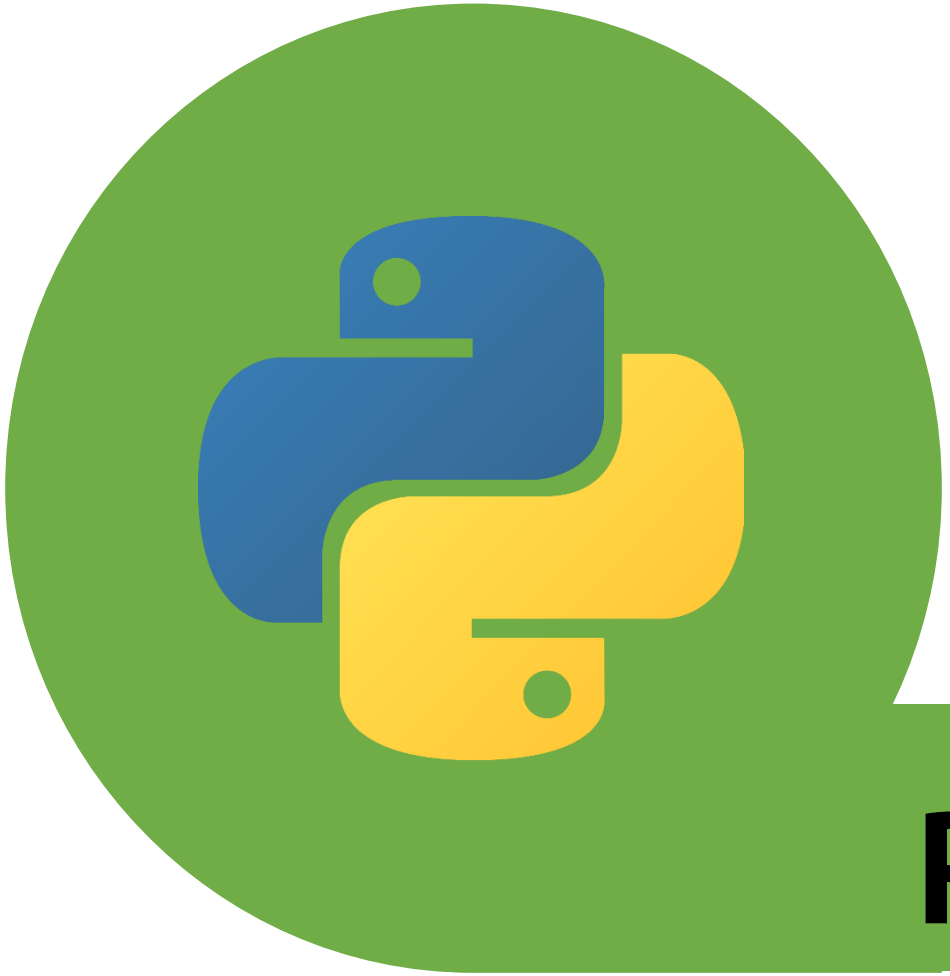

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Python for beginners

Loop operation in python

- The for statement in Python differs a bit from what you may be used to in C or Pascal

- Python’s for statement iterates over the items of any sequence (a list or a string), in the order that they appear in the sequence

Loop

```
words = ['apple' , 'banana' , 'orange' , 'cherry' , 'straberry']

for w in words:
    print(w , len(w))
```

```
apple 5
banana 6
orange 6
cherry 6
straberry 9
```

Loop

```
words = ['apple' , 'banana' , 'orange' , 'cherry' , 'straberry']
for item in words[1:4]:
    print (item)
```

```
banana
orange
cherry
```

```
for item in words[2:5]:
    print(item)
```

```
orange
cherry
straberry
```

Loop

range (5) output : 0, 1, 2, … , 5

range (2 , 7) output : 2, 3, 4, 5, 6, 7

range (2, 10, 2) output: 2, 4, 6, 8

range (-30, -50, -2) output:-30, -32 , … , -48

```
for i in range(5):
    print (i)
```

```
0
1
2
3
4
```

```
for i in range (2 ,5):
    print (i)
```

```
2
3
4
```

```
for i in range (2 ,10 , 2):
    print (i)
```

```
2
4
6
8
```

```
for i in range(-30 , -50 , -2):
    print (i)
```

```
-30
-32
-34
-36
-38
-40
-42
-44
-46
-48
```

Loop

```
words = ['apple' , 'banana' , 'orange' , 'cherry' , 'straberry']

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

```
0 apple
1 banana
2 orange
3 cherry
4 straberry
```

Loop

Reversed (iter) : return itteratable object in reversed order

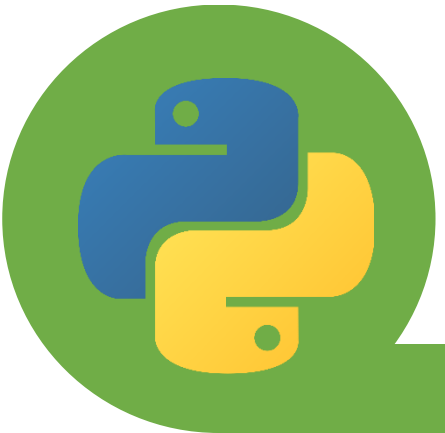
sorted(iter) : sort itteratable object

```
for i in reversed(range(1, 10, 2)):
    print(i)
```

```
9
7
5
3
1
```

```
basket = ['apple', 'orange', 'apple', 'pear', 'orange', 'banana']
for f in sorted(set(basket)):
    print(f)
```

```
apple
banana
orange
pear
```



Loop

enumerate(ittratableObj , start) : return enumerate starting from start as tuple

```
words = ['apple' , 'banana' ,'orange' , 'cherry' ,'straberry']
for item in enumerate(words):
    print(item)
```

```
(0, 'apple')
(1, 'banana')
(2, 'orange')
(3, 'cherry')
(4, 'straberry')
```

```
for count,ele in enumerate(words,100):
    print (count,ele)
```

```
100 apple
101 banana
102 orange
103 cherry
104 straberry
```

Loop

Zip(iter1, iter2) : return zip format of iter1 and iter2 as tuple

```
words = ['apple' , 'banana' ,'orange' , 'cherry' ,'straberry']
quality = ['A','B','A+','C','B+']
```

```
for item,qu in zip(words,quality):
    print (item,qu)
```

```
apple A
banana B
orange A+
cherry C
straberry B+
```

```
for item,qu in zip(words,quality):
    print ("Fruite :  %s     Quality : %s" %(item,qu))
```

```
Fruite :  apple     Quality : A
Fruite :  banana     Quality : B
Fruite :  orange     Quality : A+
Fruite :  cherry     Quality : C
Fruite :  straberry     Quality : B+
```

Loop

Zip(iter1, iter2) : return zip format of iter1 and iter2 as tuple

```
questions = ['name', 'quest', 'favorite color']
answers = ['lancelot', 'the holy grail', 'blue']

for q, a in zip(questions, answers):
    print('What is your {0}? It is {1}.'.format(q, a))
```

```
What is your name? It is lancelot.
What is your quest? It is the holy grail.
What is your favorite color? It is blue.
```

Loop

while

```
a = 0

while a < 10:
    print(a)
    a = a + 1
```

```
0
1
2
3
4
5
6
7
8
9
```

Fibonacci series:

```
a, b = 0, 1

while a < 10:
    print(a)
    a, b = b, a+b
```

```
0
1
1
2
3
5
8
```