



For Loops



Complete Python Bootcamp

Many objects in Python are “iterable”, meaning we can iterate over every element in the object.

Such as every element in a list or every character in a string.

We can use for loops to execute a block of code for every iteration.



Complete Python Bootcamp

The term **iterable** means you can “iterate” over the object.

For example you can iterate over every character in a string, iterate over every item in a list, iterate over every key in a dictionary.



Complete Python Bootcamp

- Syntax of a for loop

```
my_iterable = [1,2,3]
for item_name in my_iterable:
    print(item_name)
```

```
>> 1
```

```
>> 2
```

```
>> 3
```



**Let's explore these
concepts!**

```
In [1]: mylist = [1,2,3,4,5,6,7,8,9,10]
```

```
In [2]: for num in mylist:  
        print(num)
```

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

```
In [ ]:
```

```
In [1]: mylist = [1,2,3,4,5,6,7,8,9,10]
```

```
In [3]: for jelly in mylist:  
        print(jelly)
```

1
2
3
4
5
6
7
8
9
10

```
In [1]: mylist = [1,2,3,4,5,6,7,8,9,10]
```

```
In [4]: for jelly in mylist:  
        print('hello')
```

```
hello  
hello  
hello  
hello  
hello  
hello  
hello  
hello  
hello  
hello
```


hello
hello
hello

In [6]: `for num in mylist:
 # Check for even
 if num % 2 == 0:
 print(num)`

2
4
6
8
10

In []:

hello

```
In [7]: for num in mylist:
        # Check for even
        if num % 2 == 0:
            print(num)
        else:
            print(f'Odd Number: {num}')
```

Odd Number: 1
2
Odd Number: 3
4
Odd Number: 5
6
Odd Number: 7
8
Odd Number: 9

10

```
In [8]: list_sum = 0

        for num in mylist:
            list_sum = list_sum + num

        print(list_sum)
```

55

In []:

|

10

```
In [9]: list_sum = 0

for num in mylist:
    list_sum = list_sum + num

print(list_sum)
```

1
3
6
10
15
21
28
36
45

```
In [11]: mystring = 'Hello World'

for letter in mystring:
    print(letter)
```

H
e
l
l
o

W
o
r
l
d

File

Edit

View

Insert

Cell

Kernel

Widgets

Help

Python 3

```
print(list_sum)
```

55

In [12]:

```
for letter in 'Hello World':  
    print(letter)
```

H
e
l
l
o

W
o
r
l
d

55

In [15]:

```
for _ in 'Hello World':  
    print('Cool!')
```

Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!
Cool!

Cool!
Cool!
Cool!

```
In [16]: tup = (1,2,3)

for item in tup:
    print(item)
```

1
2
3

```
In [ ]:
```




```
In [17]: mylist = [(1,2),(3,4),(5,6),(7,8)]
```

```
In [18]: len(mylist)
```

```
Out[18]: 4
```

```
In [19]: for item in mylist:
          print(item)
```

```
(1, 2)
```

```
(3, 4)
```

```
(5, 6)
```

```
(7, 8)
```

```
In [ ]: |
```

In [18]: `len(mylist)`

Out[18]: 4

In [20]: `for (a,b) in mylist:
 print(a)
 print(b)`

1
2
3
4
5
6
7
8

3

```
In [17]: mylist = [(1,2),(3,4),(5,6),(7,8)]
```

```
In [18]: len(mylist)
```

```
Out[18]: 4
```

```
In [21]: for a,b in mylist:
          print(a)
```

1
3
5
7

3

```
In [17]: mylist = [(1,2),(3,4),(5,6),(7,8)]
```

```
In [18]: len(mylist)
```

```
Out[18]: 4
```

```
In [22]: for a,b in mylist:
          print(b)
```

2

4

6

8



6

8

```
In [24]: mylist = [(1,2,3),(5,6,7),(8,9,10)]
```

```
In [25]: for item in mylist:
          print(item)
```

(1, 2, 3)

(5, 6, 7)

(8, 9, 10)

```
In [ ]:
```

6
8

Tuple Unpacking

```
In [24]: mylist = [(1,2,3),(5,6,7),(8,9,10)]
```

```
In [26]: for a,b,c in mylist:
          print(b)
```

2
6
9

```
In [ ]:
```

File

Edit

View

Insert

Cell

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Widgets

Help



Python 3



2

6

9

```
In [27]: d = {'k1':1, 'k2':2, 'k3':3}
```

```
for item in d:  
    print(item)
```

k1

k2

k3

```
In [ ]:
```

2
6
9

```
In [28]: d = {'k1':1, 'k2':2, 'k3':3}

for item in d.items():
    print(item)
```

```
('k1', 1)
('k2', 2)
('k3', 3)
```

```
In [ ]:
```



```
print(D)
```

2

6

9

In [29]: `d = {'k1':1, 'k2':2, 'k3':3}`

```
for key,value in d.items():  
    print(value)
```

1

2

3

In []: