

LOOPS IN PYTHON

```
In [1]: print ('ds')
print('ds')
print(ds)
print(ds)
print(ds)
```

```
ds
ds
ds
ds
ds
```

```
In [3]: i = 1 # initializing

while i<=5: #condition
    print('data science')
    i = i + 1 # increment
```

```
data science
data science
data science
data science
data science
```

```
In [5]: i = 5

while i>=1:
    print('data science')
    i = i - 1
```

```
data science
data science
data science
data science
data science
```

```
In [6]: i = 1
while i<=5:
    print('data science :', i)
    i = i + 1
```

```
data science : 1
data science : 2
data science : 3
data science : 4
data science : 5
```

```
In [7]: i = 5

while i>=1:
    print('data science :', i)
    i = i - 1
```

```
data science : 5  
data science : 4  
data science : 3  
data science : 2  
data science : 1
```

```
In [19]: i = 1  
  
while i<=5:  
    print('data science')  
    j = 1  
    while j<=4:  
        print('technology')  
        j = j + 1  
  
    i = i + 1  
    print()
```

```
data science  
technology
```

```
technology
```

```
technology
```

```
technology
```

```
data science  
technology
```

```
technology
```

```
technology
```

```
technology
```

```
In [20]: i = 1  
  
while i<=5:  
    print('data science') # when we mention end then new line will not create  
    j = 1  
    while j<=4:  
        print('technology')  
        j = j + 1  
  
    i = i + 1  
    print()  
  
# the output which we got is very lengthy but how to make them one line lets
```

```
data science
technology
technology
technology
technology
```

```
In [21]: i = 1
while i<=5:
    print(' datascience' , end = "")
    j = 1
    while j<=4:
        print(' technology' , end="")
        j = j + 1

    i = i + 1
    print()
```

```
datascience technology technology technology technology
```

```
In [22]: # Lets use while loop usig some numbers
i = 1

while i <= 2 :
    j = 0
    while j <= 2 :
        print(i*j, end=" ")
        j += 1
    print()
    i += 1
```

```
0 1 2  
0 2 4
```

```
In [25]: i = 1  
while i <=4 :  
    j = 0  
    while j <= 3 :  
        print(i*j, end=" ")  
        j += 1  
    print()  
    i += 1
```

```
0 1 2 3  
0 2 4 6  
0 3 6 9  
0 4 8 12
```

```
In [28]: i = 10  
while i <= 4 :  
    j = 1  
    while j <= 3 :  
        print(i*j, end=" ")  
        j += 1  
  
    print()  
    i += 1  
  
else:  
    print('condition is not match')
```

```
condition is not match
```

for loop

```
In [29]: name = 'nit'  
  
for i in name:  
    print(i)
```

```
n  
i  
t
```

```
In [30]: name1 =[1, 3.5, 'hello']  
  
for i in name1:  
    print(i)
```

```
1  
3.5  
hello
```

```
In [31]: range (5)
```

```
Out[31]: range(0, 5)
```

```
In [32]: for i in range(5):  
    print(i)
```

```
0  
1  
2  
3  
4
```

```
In [33]: for i in range(10,50,5):  
    print(i)
```

```
10  
15  
20  
25  
30  
35  
40  
45
```

```
In [34]: for i in range(1, 31):  
  
    if i %3 == 0:  
        print(i)
```

```
3  
6  
9  
12  
15  
18  
21  
24  
27  
30
```

BREAK, CONTINUE, PASS

```
In [36]: for i in range(1, 11):  
    print(i)
```

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

```
In [37]: for i in range(1, 11):  
    if i == 4:  
        break  
    print(i)
```

```
1  
2  
3
```

```
In [39]: for i in range (1 , 11):
    if i == 4:
        continue
    print(i)
```

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

```
In [42]: for i in range(1,11):
```

```
Cell In[42], line 2
```

```
^
```

```
_IncompleteInputError: incomplete input
```

```
In [43]: for i in range (1,11):
    pass
```

```
In [44]: x = int(input('how many choclate you want?:?'))
i = 1
while i<=x:
    print(' choclate :' , i)
    i += 1
```

```
choclate : 1
choclate : 2
choclate : 3
choclate : 4
choclate : 5
```

```
In [47]: ava = 5
x = int(input('how many choclate you want?:?'))

i = 1
while i<=x:
    print('choclate:', i)
    i += 1
```

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

```
In [56]: available_choclate = 5
x = int(input('how many choclate user want?:?'))
```

```
i = 1
while i<=x:
    if i>available_choclate:
        break
    print('chocolate')
    i += 1
print('bye for now')
```

```
chocolate
chocolate
chocolate
chocolate
bye for now
```

```
In [57]: available_choclet = 5

x= int(input('how many choclate you want:?'))

i = 1
while i<=x:
    if i>available_choclate:
        print('out of stock')
        break
    print('chocolate:', i)
    i += 1
print('bye for now')
```

```
chocolate: 1
chocolate: 2
chocolate: 3
chocolate: 4
chocolate: 5
out of stock
bye for now
```

```
In [58]: for i in range(1,51):

    if i%3 == 0:

        print(i)

print('end')
```

```
3
6
9
12
15
18
21
24
27
30
33
36
39
42
45
48
end
```

```
In [71]: for i in range(1,51):

    if i%3 == 0:
        continue
    print(i)
print('end')
```

```
1
2
4
5
7
8
10
11
13
14
16
17
19
20
22
23
25
26
28
29
31
32
34
35
37
38
40
41
43
44
46
47
49
50
end
```

```
In [74]: for i in range (1,51):
    if i%3 == 0 or i%5 == 0:

        continue
    print (i)
    #print('end')
# it will skip all the value which is divisible by 3 or 5
```

```
1  
2  
4  
7  
8  
11  
13  
14  
16  
17  
19  
22  
23  
26  
28  
29  
31  
32  
34  
37  
38  
41  
43  
44  
46  
47  
49
```

```
In [75]: nums = [12,15,18,21,26, 30,40]
```

```
for num in nums:  
    if num % 5 == 0:  
        print(num)
```

```
15  
30  
40
```

```
In [76]: nums = [12,5,15,18,21,26,30,40]
```

```
for num in nums:  
    if num % 5 == 0:  
        print(num)  
        #break
```

```
5  
15  
30  
40
```

```
In [77]: nums = [12,18,21,26]
```

```
for num in nums:  
    if num % 5 == 0:  
        print(num)  
        break
```

```
In [78]: nums = [12,18,21,26]
```

```
for num in nums:  
    if num % 5 == 0:
```

```
        print(num)
        #break
else:
    print('number not found')
```

number not found

```
In [80]: nums = [12,18,21,26,15]
for num in nums:
    if num % 5 == 0:
        print(num)
        break
else:
    print('number not found')
```

15

```
In [ ]:
```