

# 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

data science  
technology  
technology  
technology  
technology

data science  
technology  
technology  
technology  
technology

data science  
technology  
technology  
technology  
technology

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  
datascience technology technology technology technology  
datascience technology technology technology technology  
datascience technology technology technology technology  
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
```

```
chocolate : 1  
chocolate : 2  
chocolate : 3  
chocolate : 4  
chocolate : 5
```

```
In [47]: ava = 5  
        x = int(input('how many choclate you want:?'))  
  
        i = 1  
        while i<=x:  
            print('chocolate:', i)  
            i += 1
```

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

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

```

i = 1
while i<=x:
    if i>available_chocolate:
        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 chocolate you want:?'))

i = 1
while i<=x:
    if i>available_chocolate:
        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 [ ]: