

09t May 2025

Loops in Python

```
In [1]: print('data science')  
print('data science')  
print('data science')  
print('data science')  
print('data science')
```

data science
data science
data science
data science
data science

```
In [2]: 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 [3]: i = 5          # initializing  
  
while i>=1:          # condition  
    print('data science')  
    i = i - 1        # increment
```

data science
data science
data science
data science
data science

```
In [4]: i = 1          # initializing  
while i<=5:          # condition  
    print('data science:',i)  
    i = i + 1        # increment
```

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

```
In [5]: i = 5           # initializing

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

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

```
In [6]: 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 ref
```

```
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 [7]: i = 1
while i<=5:
    print(' data science', end = "") # when we mention end then new line will not c
    j = 1
    while j<=4:
        print(' technology', end="")
        j = j + 1

    i = i + 1
    print()
```

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 [8]: # Lets use while loop usig some numbers
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 [9]: name = 'nit'
for i in name:
    print(i)
```

n
i
t

```
In [10]: name1 = [1,3.5,'hallo'] #i want print the value individually
for i in name1:
    print(i)
```

1
3.5
hallo

```
In [11]: for i in [2, 3, 7.8, 'hi']:
    print(i)
```

2
3
7.8
hi

```
In [12]: for i in range(5):  
         print(i)
```

0
1
2
3
4

```
In [13]: for i in range(1,10,3):  
         print(i)
```

1
4
7

```
In [14]: for i in range(1,51):  
         if i%5==0 :  
             print(i)
```

5
10
15
20
25
30
35
40
45
50

```
In [15]: for i in range(1,51):  
         if i%5!=0 :  
             print(i)
```

1
2
3
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6
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8
9
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32
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37
38
39
41
42
43
44
46
47
48
49

```
In [16]: for i in range(1,11):  
         print(i)
```

1
2
3
4
5
6
7
8
9
10

```
In [17]: for i in range(1,11):  
        if i == 5:  
            break  
        print(i)
```

1
2
3
4

```
In [18]: for i in range(1,11):  
        if i == 7:  
            break  
        print(i)
```

1
2
3
4
5
6

```
In [19]: for i in range(1,11):  
        if i == 6:  
            continue  
        print(i)
```

1
2
3
4
5
7
8
9
10

```
In [20]: for i in range(1,11):  
        if i == 5:  
            continue  
        print('hello ',i)
```

hello 1
hello 2
hello 3
hello 4
hello 6
hello 7
hello 8
hello 9
hello 10

```
In [21]: for i in range(1,11):
```

```
Cell In[21], line 1
    for i in range(1,11):
```

SyntaxError: incomplete input

```
In [22]: for i in range(1,11):
        pass
```

```
In [23]: 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 [24]: for i in range(1,50):
        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
end
```

```
In [25]: 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
end

```
In [26]: for i in range(1,51):  
         if i%3 == 0 and i%5 == 0:  
             continue  
         print(i)  
         print('end')  
         # it will skip all the value which is divisible by 3 or 5
```

1
2
3
4
5
6
7
8
9
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11
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28
29
31
32
33
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37
38
39
40
41
42
43
44
46
47
48
49
50
end

```
In [27]: # i dont want to print the values which are odd numbers that means print only even
for i in range(1,50):

    if (i%2 == 0):
        pass
    else:
```

```
    print(i)
print('bye')
```

1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
bye

```
In [28]: print('# # # #')
         print('# # # #')
         print('# # # #')
         print('# # # #')
```


#

```
In [29]: for j in range(4):
         print('#', end=" ")
```

#

```
In [30]: for j in range(4):
         print('#', end=" ")

         print()

         for j in range(4):
             print('#', end=" ")
```


#

```
In [31]: for j in range(4):
         print('#', end=" ")
```

```
print()

for j in range(4):
    print('#', end=" ")
print()

for j in range(4):
    print('#', end=" ")

print()

for j in range(4):
    print('#', end=" ")
```

```
# # # #
# # # #
# # # #
# # # #
```

```
In [32]: for i in range(4):
          for j in range(4):
              print('#', end=" ")
          print()
          # please use debug mode in pycharm
```

```
# # # #
# # # #
# # # #
# # # #
```