

# 10-11-2025 (LOOPS IN PYTHON)

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

```
datascience
datascience
datascience
datascience
datascience
```

```
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    # decrement
```

```
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    # decrement
```

```
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')  
    j = 1  
    while j<=4:  
        print('technology')  
        j = j + 1  
  
    i = i + 1  
print()
```

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

```
In [7]: 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 [8]: 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 [9]: 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 [10]: 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 [11]: name = 'nit'

for i in name:
```

```
    print(i)
```

```
n  
i  
t
```

```
In [13]: name1 = [1, 3.5, 'hello']
```

```
for i in name1:  
    print(i)
```

```
1  
3.5  
hello
```

```
In [14]: range(5)
```

```
Out[14]: range(0, 5)
```

```
In [15]: for i in range(5):  
    print(i)
```

```
0  
1  
2  
3  
4
```

```
In [16]: for i in range(10,50,5):  
    print(i)
```

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

```
In [17]: 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 [18]: for i in range(1,11):
    print(i)
```

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

```
In [19]: for i in range(1,11):
    if i == 4:
        break
    print(i)
```

```
1
2
3
```

```
In [20]: for i in range(1,11):
    if i == 4:
        continue
    print(i)
```

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

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

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

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

```
In [23]: x = int(input('How many choclets you want:?'))

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

```
choclet : 1  
choclet : 2  
choclet : 3
```

```
In [24]: ava = 5  
  
x = int(input('How many choclets you want:?'))  
  
i = 1  
while i<=x:  
    print('choclet:', i)  
    i += 1
```

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

```
In [25]: available_choclet = 5  
  
x = int(input('How many choclets user want:?'))  
  
i = 1  
while i<=x:  
  
    if i>available_choclet:  
        break  
    print('choclet')  
    i += 1  
  
print('bye for now')
```

```
choclet  
choclet  
choclet  
choclet  
bye for now
```

```
In [26]: available_choclet = 5  
  
x = int(input('How many choclets you want:?'))  
  
i = 1  
while i<=x:  
  
    if i>available_choclet:  
        print('out of stock')  
        break  
    print('choclet:', i)  
    i += 1
```

```
print('bye for now')
```

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

```
In [27]: 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 [28]: 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 [29]: for i in range(1,51):  
    if i%3 == 0 or i%5 == 0:  
        continue  
    print(i)
```

```
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 [30]: for i in range(1,51):  
  
    if i%3 == 0 or i%5 == 0:  
  
        continue  
    print(i)  
print('end')
```

```
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 [31]: nums = [12,5,15,18,21,26, 30,40]  
  
for num in nums:  
    if num % 5 == 0:  
        print(num)
```

```
5  
15  
30  
40
```

```
In [32]: nums = [12,5,15,18,21,26, 30,40]  
  
for num in nums:  
    if num % 5 == 0:  
        print(num)  
        break
```

```
5
```

```
In [33]: nums = [12,18,21,26]  
  
for num in nums:  
    if num % 5 == 0:  
        print(num)  
        break
```

```
In [35]: 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 [36]: nums = [12,18,21,26,15]

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

else:
    print('number not found')
```

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## 10-11-2025 Loops problems Geeks for Geeks

### LOOPS

for loop

Loops with list

```
In [38]: li = ["geeks", "for", "geeks"]
for x in li:
    print(x)
```

geeks  
for  
geeks

Loops with tuple

```
In [40]: tup = ("geeks", "for", "geeks")
for x in tup:
    print(x)
```

geeks  
for  
geeks

Loops with string

```
In [42]: s = "abc"
for char in s:
    print(char)

a
b
c
```

Loops with dictionary

```
In [43]: d = {"x":123,
           "y": 354
         }
for x in d:
    print(f"{x}: {d[x]}")

x: 123
y: 354
```

Loops through sets

```
In [44]: set1 = {10, 30, 20}
for x in set1:
    print(x)

10
20
30
```

while loop

```
In [45]: cnt = 0
while (cnt < 3):
    cnt = cnt + 1
    print("Hello Geek")
```

```
Hello Geek
Hello Geek
Hello Geek
```

Nested Loops

```
In [46]: for i in range(1,5):
            for j in range(i):
                print(i, end = " ")
            print()
```

```
1
2 2
3 3 3
4 4 4 4
```

Loop Control Statements

```
In [47]: for letter in "geeksforgeeks":
            if letter == "e" or letter == "s":
```

```
    continue
print("Current letter: ", letter)

Current letter: g
Current letter: k
Current letter: f
Current letter: o
Current letter: r
Current letter: g
Current letter: k
```

```
In [49]: for letter in "GeeksForGeeks":
    if letter == "e" or letter == "s":
        break
print("Current Letter: ", letter)
```

Current Letter: e

## Loop Problems For Loop

```
In [50]: num = int(input("Give a number to have multiplication table"))

for i in range(1, 11):
    print(i*num)
```

5  
10  
15  
20  
25  
30  
35  
40  
45  
50

```
In [52]: n = 5

for i in range(1, 11):
    print(i*n, end=" ")
```

5 10 15 20 25 30 35 40 45 50

```
In [53]: s = "DoctorPhenomenal"

for i in range(0, len(s), 2):
    print(s[i], end="")
```

DcoPeoea

```
In [54]: s = "DoctorPhenomenal"

for i in range(0, len(s)):
    if i%2 == 0:
        print(s[i], end="")
```

DcoPeoea

## While Loop

```
In [55]: x = 5  
  
while x>=0:  
    print(x, end=" ")  
    x -= 1
```

```
5 4 3 2 1 0
```

```
In [56]: x = 10  
i = 1  
squared = 0  
while True:  
    if squared > x:  
        break  
    squared = i**2  
    print(squared, end=" ")  
    i+=1  
    x-=1
```

```
1 4 9
```

```
In [ ]:
```