

Short hand if

```
In [1]: a=30
        b=20
        if a>b:
            print('a is greater than b')
```

a is greater than b

Loops

```
In [2]: 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 [3]: i=1
        while i<=5:
            print('data science')
            i=i+1
```

data science
data science
data science
data science
data science

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

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
```

Nested while loop

```
In [8]: 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

Data science
Technology
Technology
Technology
Technology

Data science
Technology
Technology
Technology
Technology

Data science
Technology
Technology
Technology
Technology

```
In [12]: i=1
while i<=5:
    print('data science',end="")
    j=1
    while j<=6:
        print('technology',end="")
        j=j+1
    i=i+1
    print()
```

data science technology technology technology technology technology technology
data science technology technology technology technology technology technology
data science technology technology technology technology technology technology
data science technology technology technology technology technology technology
data science technology technology technology technology technology technology

```
In [13]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
    print()
```

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

```
In [14]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
    print()
```

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

```
In [15]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
    print()
```

```
data science technology technology technology technology technology technology da
ta science technology technology technology technology technology technology data
science technology technology technology technology technology technology data sc
ience technology technology technology technology technology technology data scie
nce technology technology technology technology technology technology technology
```

```
In [16]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
    print()
```

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

```
In [18]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
```

data science technology technology technology technology technology technology da
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 science technology technology technology technology technology technology data sc
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```
In [19]: i=1
while i<=5:
    print('data science',end=" ")
    j=1
    while j<=6:
        print('technology',end=" ")
        j=j+1
    i=i+1
    print()
```

data science technology technology technology technology technology technology
 data science technology technology technology technology technology technology
 data science technology technology technology technology technology technology
 data science technology technology technology technology technology technology
 data science technology technology technology technology technology technology

```
In [20]: i=1
while i<=2:
    j=0
    while j<=2:
        print(i*j,end=" ")
        j=j+1
    i=i+1
    print()
```

0 1 2
 0 2 4

```
In [21]: i=1
while i<=2:
    j=0
    while j<=2:
        print(i*j,end=" ")
        j += 1
    i += 1
    print()
```

0
 2
 6

```
In [22]: 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 [23]: i=1
while i<=2:
    j=1
```

```

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

```

```

1 2
2 4

```

```

In [24]: i=1
while i<= 4:
    j=0
    while j<=3:
        print(i*j,end=" ")
        j += 1
    i += 1
    print()

```

```

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

```

```

In [1]: i=1
while i<=2:
    print('data')
    j=0
    while j<=3:
        print('technology')
        j=j+1
    print()
    i=i+1

```

```

data
technology
technology
technology
technology

```

```

data
technology
technology
technology
technology

```

```

In [2]: i=1
while i<= 2:
    j=0
    while j<=3:
        print(i*j,end=" ")
        j += 1
    i += 1
    print()

```

```

0 1 2 3
0 2 4 6

```

For loop

```
In [3]: name='nit'
        for i in name:
            print(i)
```

n
i
t

```
In [4]: name1=[1,3.5,'hello']
        for i in name1:
            print(i)
```

1
3.5
hello

```
In [5]: for i in [2,3,7.8,'hi']:
        print(i)
```

2
3
7.8
hi

```
In [6]: range(5)
```

Out[6]: range(0, 5)

```
In [7]: list(range(0,5))
```

Out[7]: [0, 1, 2, 3, 4]

```
In [8]: for i in range(5):
        print(i)
```

0
1
2
3
4

```
In [9]: for i in range(2,5):
        print(i)
```

2
3
4

```
In [11]: for i in range(1,10,3):
        print(i)
```

1
4
7

```
In [13]: for i in range(1,51):
        if i % 5 == 0:
            print(i)
```

Cell In[13], line 3

```
print(i)
```

^

IndentationError: expected an indented block after 'if' statement on line 2

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

Cell In[14], line 2

```
if i%5!=0
```

^

SyntaxError: expected ':'

```
In [16]: for i in range(1,51):  
         if i%5==0:  
             print(i)
```

5
10
15
20
25
30
35
40
45
50

```
In [17]: for i in range(1,51):  
         if i%5!=0:  
             print(i)
```


1
2
3
4
6
7
8
9
11
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27
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34
36
37
38
39
41
42
43
44
46
47
48
49

vendor chocolate machine

```
In [21]: x=int(input('how many chocolates you want:?'))  
         i=1  
         while i<=x:  
             print('chocolate')  
             i += 1
```

chocolate
chocolate
chocolate
chocolate
chocolate

```
In [22]: ava =5  
         x=int(input('how many chocolates you want:?'))  
         i =1
```

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

chocolate
chocolate
chocolate
chocolate
chocolate
chocolate
chocolate
chocolate
chocolate
chocolate
chocolate

```
In [35]: available_chocolate =5
x=int(input('how many chocolates you want:?'))
i =1
while i<=x:
    print('chocolate')
    if i>available_chocolates:
        breakprint('chocolate')
```

chocolate
chocolate
chocolate
bye for now

available_chocolates=5

x=int(input()) i=1 while i<=x: if i>available_chocolates: print('out of stock') break
print('chocolate') i+=1 print('bye for now')

```
In [39]: available_chocolates = 5
x = int(input('How many chocolates you want:?'))
i = 1
while i<=x:
    if i>available_chocolates:
        print('out of stock')
        break
    print('chocolate')
    i += 1
print('bye for now')
```

chocolate
chocolate
bye for now

```
In [40]: available_chocolates = 5
x = int(input('How many chocolates you want:?'))
i = 1
while i<=x:
    if i>available_chocolates:
        print('out of stock')
        break
    print('chocolate')
    i += 1
print('bye for now')
```

chocolate
chocolate
chocolate
chocolate
chocolate
out of stock
bye for now

```
In [41]: for i in range(1,11):  
        print(i)
```

1
2
3
4
5
6
7
8
9
10

```
In [42]: for i in range(1,11,2):  
        print(i)
```

1
3
5
7
9

```
In [44]: for i in range(1,11):  
        if i==6:  
            break  
        print(i)
```

1
2
3
4
5

```
In [45]: for i in range(1,11):  
        if i==3:  
            continue  
        print(i)
```

1
2
4
5
6
7
8
9
10

```
In [46]: for i in range(1,11):  
        if i==6:  
            continue  
        print('hello:',i)
```

```
hello: 1  
hello: 2  
hello: 3  
hello: 4  
hello: 5  
hello: 7  
hello: 8  
hello: 9  
hello: 10
```

```
In [47]: for i in range(1,11):  
        pass
```

```
In [49]: 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 [50]: 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 [52]: for i in range(1,51):
          if i%3!=0:
              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 [53]: 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 [54]: for i in range(1,50):  
         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 [56]: for i in range(1,50):
          if i%3==0 and i%5==0: # it prints all numbers from 1 to 49
              continue
          print(i)
          print('end')
```


1
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3
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18
19
20
21
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23
24
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27
28
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39
40
41
42
43
44
46
47
48
49
end

```
In [57]: 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 [58]: for i in range(1,51):  
         if i%2==0:  
             continue  
         print(i)  
         print('end')
```

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
end

```
In [60]: for i in range(1,51):  
         if i%2==0:  
             continue  
         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 []: