

PYTHON

CONDITIONAL STATEMENT & LOOPS

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IF

if Statements

It consists of a Boolean expression which results is either TRUE or FALSE followed by one or more statements.

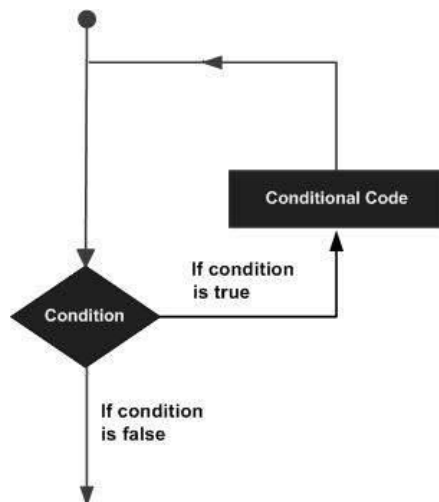
```
if expression:  
    #execute your code  
  
if expression:  
    #execute your code  
else:  
    #execute your code
```

```
if expression:  
    #execute your code  
elif expression:  
    #execute your code  
else:  
    #execute your code
```

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Loops

A loop statement allows us to execute a statement or group of statements multiple times. The following diagram illustrates a loop statement –



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While

► Syntax

```
while expression:  
    statement(s)
```

Ex

```
count = 0  
while (count < 5):  
    print ('The count is:', count)  
    count = count + 1  
  
print ("Good bye!")
```

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for Loop

- ▶ Syntax

```
for iterating_var in sequence:  
    statements(s)
```

- ▶ The range() function

The built-in function range() is the right function to iterate over a sequence of numbers. It generates an iterator of arithmetic progressions.

Example

```
>>> range(5)
```

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For Loop

- ▶ For i in range(5):
 print(i)

- ▶ For i in "python":
 print(i)

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Loop Control Statements

S.No.	Control Statement & Description
1	break statement: Terminates the loop statement and transfers execution to the statement immediately following the loop.
2	continue statement: Causes the loop to skip the remainder of its body and immediately retest its condition prior to reiterating.
3	pass statement: The pass statement in Python is used when a statement is required syntactically but you do not want any command or code to execute.

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```
for letter in 'Python':  
    if letter == 'h':  
        break  
    print ('Current Letter :', letter)
```

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```
var = 5
while var > 0:
    print ('Current variable value :', var)
    var = var -1
    if var == 2:
        break

print ("Good bye!")
```

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```
for letter in 'Python':
    if letter == 'h':
        pass
    print ('This is pass block')
    print ('Current Letter :', letter)

print ("Good bye!")
```

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Single Statement Suites

```
flag = 1
while (flag): print ('Given flag is really true!')
print ("Good bye!")
```

else block with loops

```
no = int(input('any number: '))
numbers = [11,33,55,39,55,75,37,21,23,41,13]
for num in numbers:
    if num == no:
        print ('number found in list')
        break
else:
    print ('number not found in list')
```

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```
numbers = [11,33,55,39,55,75,37,21,23,41,13]

for num in numbers:
    if num%2 == 0:
        print ('the list contains an even number')
        break
    else:
        print ('the list does not contain even number')
```

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