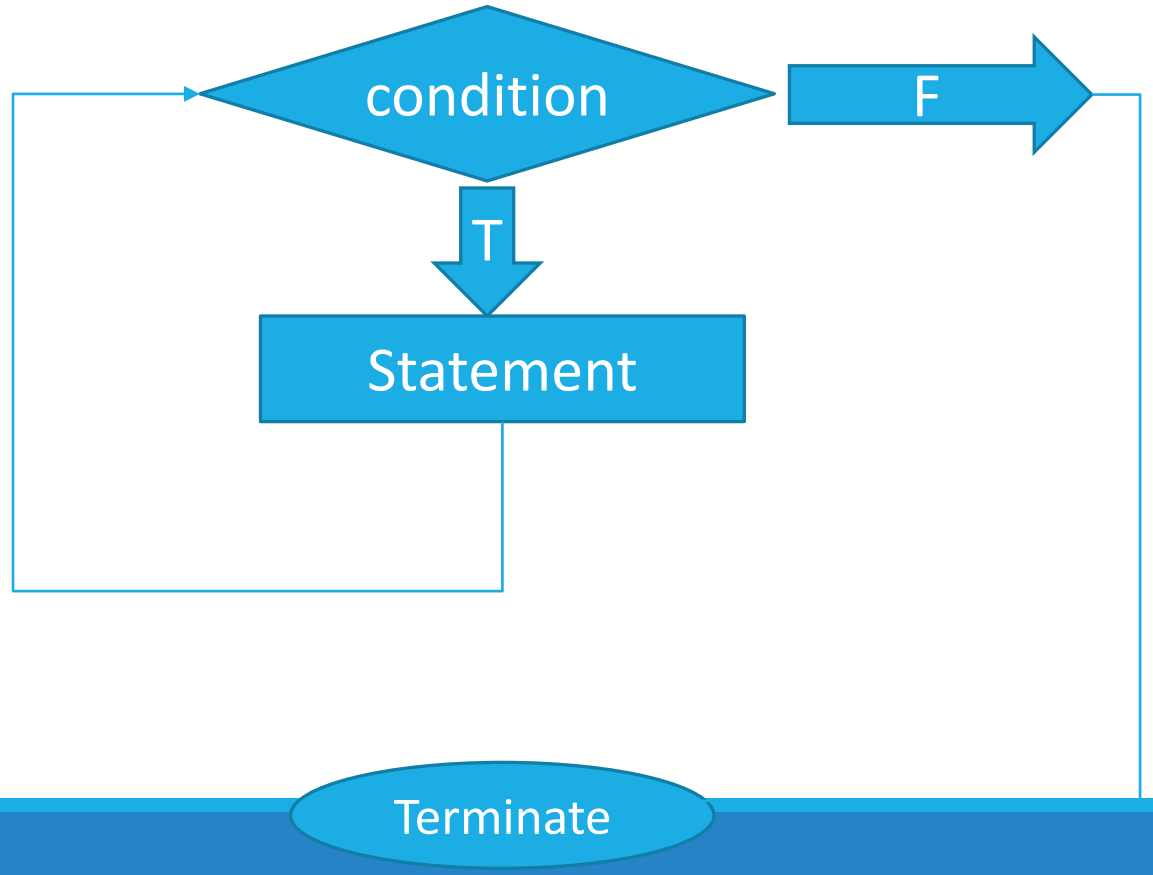
Loop

loop is used for iterating over a sequence

while loop
for loop



While Loop

Syntax:

```
while condition:
    #statement
    #increment/decrement
```

For Loop

Syntax:

```
for var in sequence:
    #statement
```

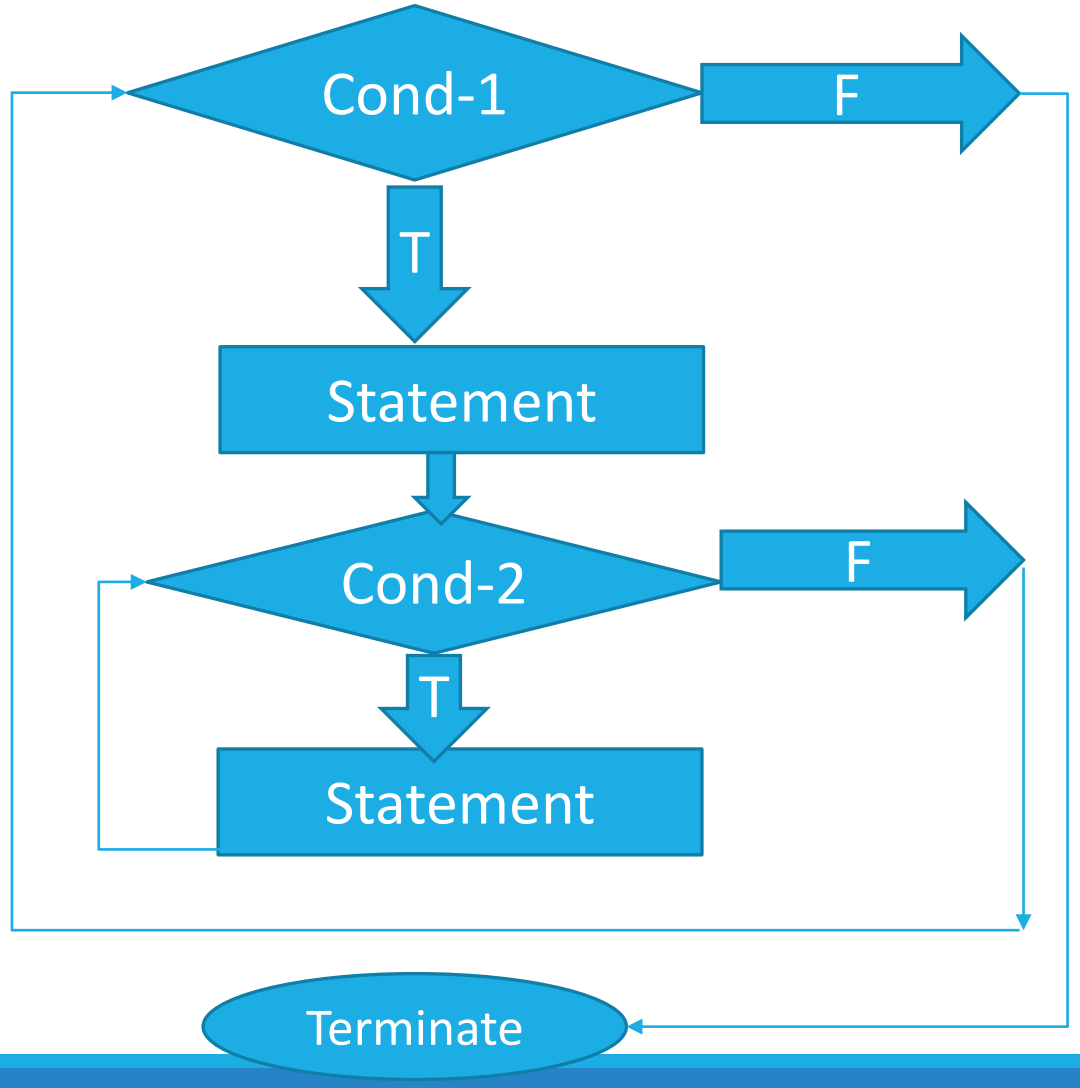
Where:

statement is :

range(start, end,I/D)
string
tuple
list
Dict
set

Nested While Loop

Nested For Loop



1
Hello

20
Hey

30

Hello
50
Hii

70

hello
100

Nested For Loop

	0	1	2	3	4
0	*				
1	*	*			
2	*	*	*		
3	*	*	*	*	
4	*	*	*	*	*

Break

Continue

Pass

String data type

String is Immutable and ordered

‘--------’ or “----------”

‘’’----------

----------’’’

Or

“””----------

----------”””

String data type

String Operation

String Method & Function

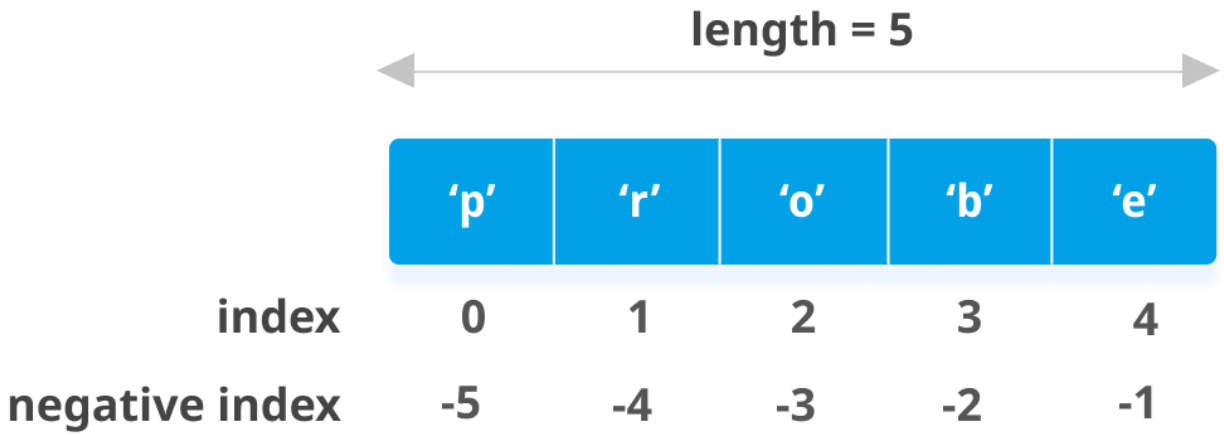
a= “Hello”
a.upper()
a.lower()
a.capitalize()
a.count()

str()
len()
min()
max()
type()

List data type

Mutable and ordered

a = [6,4,5,67,7,”Hello”,6.5]



Method & Function

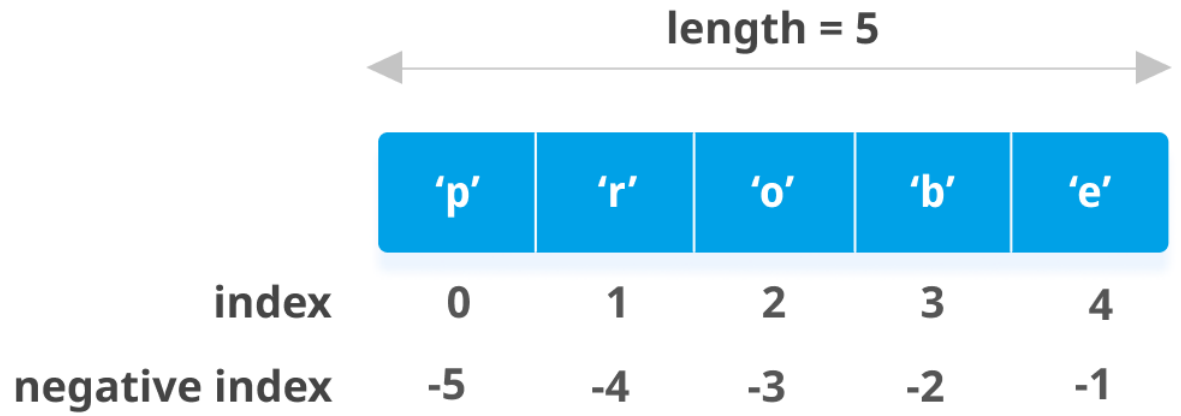
a.copy()
clear()
append()
insert()
index()
extend()
sort()
count()
remove()
reverse()
pop()

list(sequence)
len(a)
min(a)
max(a)
del var

Tuple data type

Immutable and ordered data type

()



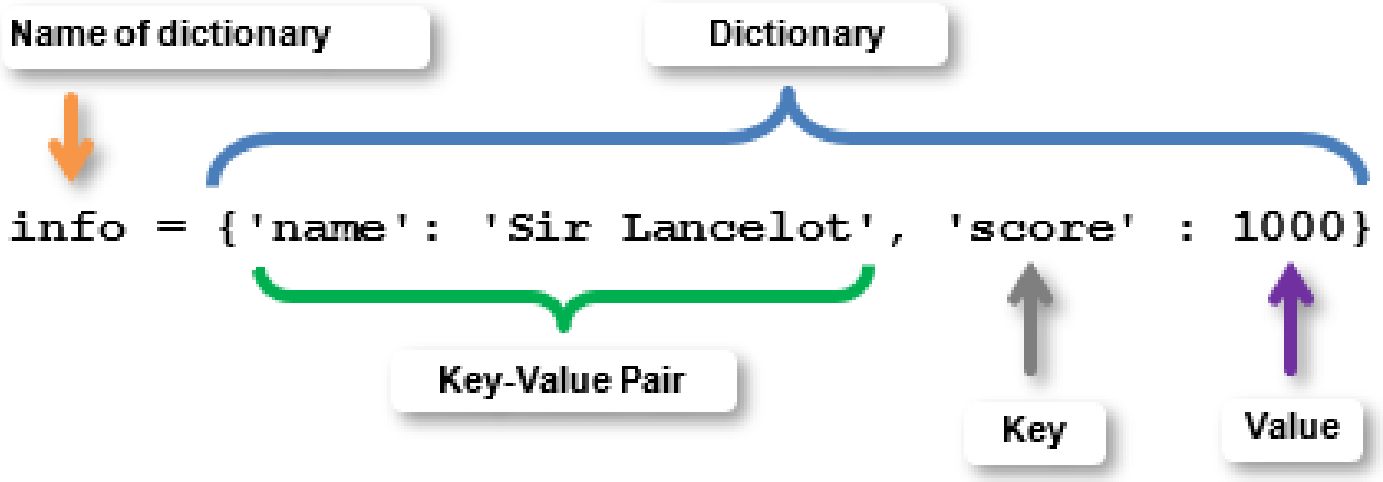
Method & Function

count()
index()

tuple(sequence)
len()
min()
max()
del var

Dictionary data type

Mutable and unordered data type



Method & Function

Method
clear()
copy()
fromkeys()
get()
items()
keys()
pop()
popitem()
update()
values()

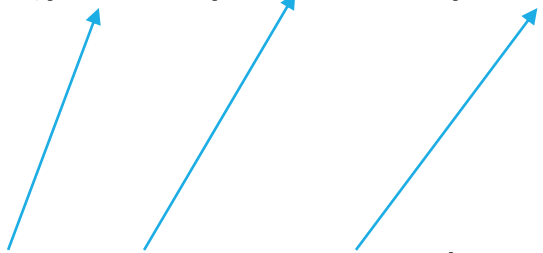
Function

A function is a block of code which only runs when it is called.

Syntax:

```
def function_name(para1,para2,.....para-n):
    #block


function_name(arg1,arg2,.......arg-n)
```



Scope of Variable

local variable
global variable

1. **User-defined function**: add(), sub()
2. **In-build function:** print(), type(), int(), input()
3. Recursion function
4. Anonymous function (Lambda function)

Return Statement

The Return statement is used to exit a function and go back to the place from where it was called.

Recursion Function

A function is calling itself is called recursion function

Anonymous Function

A function without name