

# Python

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# Chapter 1

## ONE

### 1.1 Introduction

Reference: edureka!

Hi, it is a great time to learn python programming. Before we began, let's talk about our agenda for today. We will give you a guided way of becoming a python developer.

1. Comments
2. Variable
3. Operators
4. Data types
5. Loop
6. Libraries
7. File Handling and Functions
8. Web developing and Web Scraping

### 1.2 Comment

Python comment is oneline comment mode and this is written adding a before hash tag.

e.g. : `#This is a python comment.`

## 1.3 Variable

Let's continue this series on **PYTHON**.

Variables are a special container that stores value. In python, "Variable is Variable". So no need to specify primary stage declaration of type.

### 1.3.1 Value Assignment

Syntax: *variable\_name = value*

Equal sign (=) is used to assign values to the variable.

### 1.3.2 Value changing

First we assign 2 to the variable  $x$  and then assign 9 to the  $x$ . So, present value of  $x$  is 9.  $x = 2$

$x$ 9

Now,  $x = 9$ .

If we want to access output of previous operation, use underscore (.). This means output of previous operation.

e.g. :  $10 + x$

$= 19$

$y = 2$

$- + y$

$= 21$

### 1.3.3 String Variable

String concatenation in Python is same as C++. Use + sign to concatenate.

Declaring string variable:

Syntax: *variable\_name='Name'*

e.g. : platform = 'YouTube'

IN: platform[0]

OP: 'Y'

Normally in computer, counting always starts with 0.

IN: platform[1:4]

OP: ouT

That means, first one is starting index, second-one is before ending index.

Let's use len() function for outcome the length of the string variable.

IN: len(platform)

OP: 7

It returns an integer, size of platform.

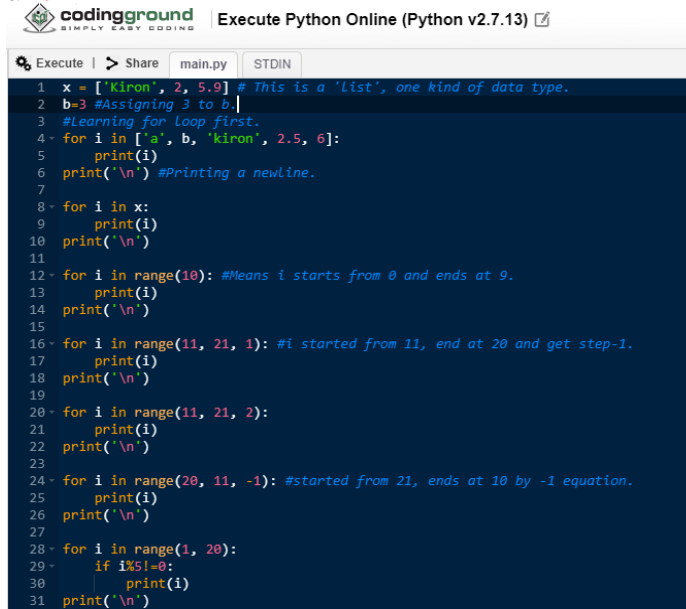
Fourth tutorial over.

## 1.4 Loop

### 1.4.1 For Loop

Now we will talk about **for** loop.

We can write **if** inside a **for**. If we have **if** inside a **for**, then we have **for** inside a **for**.

A screenshot of a web-based Python IDE. The interface includes a top bar with the 'codingground' logo and the text 'Execute Python Online (Python v2.7.13)'. Below this is a toolbar with 'Execute', 'Share', and 'main.py' tabs. The main area is a dark-themed code editor containing Python code. The code defines a list 'x' with elements 'Kiron', 2, and 5.0, then iterates over a list ['a', b, 'kiron', 2.5, 6] and a range from 0 to 9, and finally a range from 11 to 20 with a step of -1. Comments are used to explain the range function's behavior.

```
1 x = ['Kiron', 2, 5.0] # This is a 'List', one kind of data type.
2 b=3 #Assigning 3 to b
3 #Learning for Loop first.
4 for i in ['a', b, 'kiron', 2.5, 6]:
5     print(i)
6     print('\n') #Printing a newline.
7
8 for i in x:
9     print(i)
10    print('\n')
11
12 for i in range(10): #Means i starts from 0 and ends at 9.
13     print(i)
14     print('\n')
15
16 for i in range(11, 21, 1): #i started from 11, end at 20 and get step-1.
17     print(i)
18     print('\n')
19
20 for i in range(11, 21, 2):
21     print(i)
22     print('\n')
23
24 for i in range(20, 11, -1): #started from 21, ends at 10 by -1 equation.
25     print(i)
26     print('\n')
27
28 for i in range(1, 20):
29     if i%5!=0:
30         print(i)
31     print('\n')
```

List is a great kind of data type in Python. Here 'x' is a list variable. We will discuss about it later.

## 1.5 Functions

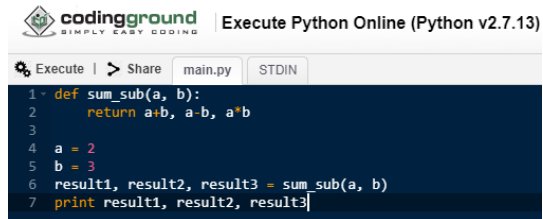
In python, user-defined functions are starts with **"def"** keyword.

```
1 def fun_name():
2     print("Kiron")
3
4 fun_name() #Calling the function.
```

Output: Kiron

### 1.5.1 Multiple return value

This is how we return multiple values from a python **"def"**



The screenshot shows a web-based Python IDE interface. At the top, there's a logo for 'codingground' with the tagline 'SIMPLY EASY CODING' and the text 'Execute Python Online (Python v2.7.13)'. Below this, there's a toolbar with 'Execute', 'Share', and a file name 'main.py'. The main area is a code editor with a dark background, containing the following Python code:

```
1 def sum_sub(a, b):  
2     return a+b, a-b, a*b  
3  
4 a = 2  
5 b = 3  
6 result1, result2, result3 = sum_sub(a, b)  
7 print result1, result2, result3
```

Output: 5, -1, 6