

Python

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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

Introduction by Mosh

Python is an interpreted language. An interpreter basically a program that converts the Human code to machine code. Python is implemented by C. We download default implementation of python from python.org. Default implementation of python is called CPython. We can use Java codes in python through Jython.

Comment

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

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

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 of a variable. That's why, Python called, dynamically typed programming language.

Value Assignment

Syntax: *variable_name = value*

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

Value changing

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

$x9$

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`

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.

Loop

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 header shows the 'codingground' logo and the text 'Execute Python Online (Python v2.7.13)'. Below the header, there are tabs for 'Execute', 'Share', 'main.py', and 'STDIN'. The main area contains a Python script with 31 lines of code. The code defines a list 'x' with elements 'kiron', 2, and 5.9. It then uses several 'for' loops to iterate over a list of values, the list 'x', a range from 0 to 9, a range from 11 to 20 with a step of 1, a range from 11 to 21 with a step of 2, a range from 20 down to 11 with a step of -1, and a range from 1 to 20, printing each value and checking for divisibility by 5.

```
1 x = ['kiron', 2, 5.9] # 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.

Functions

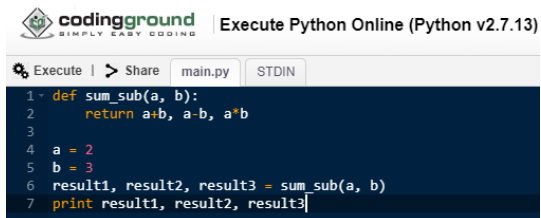
In python, user-defined functions are starts with "def" keyword.

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

Output: Kiron

Multiple return value

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



The screenshot shows the codingground interface with the title "Execute Python Online (Python v2.7.13)". The code editor contains 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

PIP

PIP: Python Installer Package

Check version: `pip --version`

List installed packages: `pip list`

Update: browse the directory where python is installed then run the command,
`python -m pip install --upgrade pip`

Install a package: `pip install package_name`

Uninstall a package: `pip uninstall package_name`

Show: information about a package briefly, `py -m pip show package_name`

Show: information about a package descriptively, `py -m pip show --verbose package_name`

Documentation [here](#).