Linux Beginner Guide

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Introduction

In this guide, I assume that followings are already installed:

1. Ubuntu 16.04.2 or Higher
2. ZSH 5.0.2 or Higher
3. VIM 8.1 or Higher
4. Python 3
5. We will connect to server via SSH

Also, you should be familiar with Linux system.
If not so, you should start at here:
https://github.com/Fumire/LinuxLecture/releases/tag/200105

Overview

Python?

Figure: Logo of Python

Python is an *interpreted* programming language, created by Guido van Rossum in 1991.

Interpreted?

Interpreted is opposed *compiled*.
Complied programming language is required compiling(translating) before
its running.
Interpreted programming language does not require compiling; it can run
by read code one-by-one line.

How to run Python?

There are two ways to run Python

(a) Python Interpreter

(b) Python Script

We will prefer (b) Python Script for better reproducibility.

print()

Example

print("Hello world")

This example will print as:

Example

Hello world

Try with other strings!

input()

Example

s = input("Write:")
print(s)

input() accepts input as string.
Also, in this example, *variable* is used; we will talk about that later.

int Type

int type means integer. You can obviously use integers in Python.

Example

print(123)
print(-321)
print(0)

Also, you can use octal and hexadecimal integers as:

Example

print(0o123)
print(0xABC)

float Type

float type means decimals.

Example

print(1.23)
print(-.3.21)

Also, you can express decimals as:

Example

print(1.23e45)
print(6.78E-9)

Those mean 1.23×10^{45} and 6.78×10^{-9}, respectively.

Arithmetic Operators

You might know how to express arithmetic operators in programming.

Example

print(3 + 4)
print(3 - 4)
print(3 * 4)
print(3 / 4)

is equivalent with

Example

$3 + 4$

$3 - 4$

3×4

$3 \div 4$

List Type