

Tutorial

01 Basics

Installation

Windows: Visit <https://www.python.org/downloads/> and download the latest version.

MacOS: Use homebrew,

```
brew install python3
```

Linux:

```
sudo apt-get update && sudo apt-get install python3
```

Editor & Input method

In any text editor(vim, Sublime) or IDE(Pycharm, Spyder), use English input method, not Chinese.

```
print("hello, world")
```

```
File "<ipython-input-5-43e9612f56f8>", line 1
  print("hello, world")
               ^
SyntaxError: EOL while scanning string literal
```

IMPORTANT:

Always ensure that you give it the file extension of .py , for example, foo.py .

Comments

Notes for the reader of the program.

```
# Write your comments at this line in python
```

```
// Write your comments at this line in java
```

```
// Write your comments at this line in go
```

Literal Constants

Numbers or Strings, use its value literally.

Numbers

Numbers are mainly of two types - integers and floats.

```
print(18) #integer  
print(3.14) #floats
```

Strings

A string is a *sequence of characters*. Strings are basically just a bunch of words.

```
print("hello,world") #string
```

Hello, World

```
#create hello.py  
print("hello,world")
```

Compile & Run

Compile: Convert a source program(Source Code) and the things it depends on into instructions in native machine language(Binary Code for Go) or intermediate code(Bytecode/class file for Java, python bytecode/pyc file for python).

Run: Executing the binary code.

To run your Java program:

1. Open a terminal window in MacOS (cmd in Windows OS)
2. Change directory to where you saved the file, for example, cd /tmp/java
3. Compile the program by entering the command javac hello.java .

```
$ javac hello.java
```

If you success in compile process, no text will be shown at the console. However, you will get a new file hello.class in the same directory as hello.java.

4. Run the program by entering the command `java hello.py` . The output is as shown below.

```
$ java hello
hello world
```

To run your Python program:

1. Open a terminal window in MacOS (cmd in Windows OS)
2. Change directory to where you saved the file, for example, `cd /tmp/py`
3. Compile &Run the program by entering the sole command `python hello.py` . The output is as shown

below.

```
$ python hello.py
hello world
```