Lesson 1 - Introduction to Python

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- is powerful and fast;
- plays well with others;
- runs everywhere;
- is friendly & easy to learn;
- is open.

Python 2.7.x

- print "hello world!"
- 3 / 2 # 1
- 3 // 2 # 1
- 3 / 2.0 # 1.5
- 3 // 2.0 # 1.0

Python 3.x

- print("hello world!")
- 3 / 2 # 1.5
- 3 // 2 # 1
- 3 / 2.0 # 1.5
- 3 // 2.0 # 1.0

More differences:

http://sebastianraschka.com/Articles/2014_python_2_3_key_diff.html

python 3 的安装

官网：https://www.python.org

文件下载：https://www.python.org/downloads/release/python-363/

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		e9180c69ed9a878a4a8a3ab221e32fa9	22673115	SIG
XZ compressed source tarball	Source release		b9c2c36c33fb89bda1fefd37ad5af9be	16974296	SIG
Mac OS X 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	ce31f17c952c657244a5cd0cccae34ad	27696231	SIG
Windows help file	Windows		a82270d7193f9fb8554687e7ca342df1	8020197	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64, not Itanium processors	b1daa2a41589d7504117991104b96fe5	7145844	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64, not Itanium processors	89044fb577636803bf49f36371dca09c	31619840	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64, not Itanium processors	b6d61642327f25a5ebd1a7f11a6d3707	1312480	SIG
Windows x86 embeddable zip file	Windows		cf1c75ad7ccf9dec57ba7269198fd56b	6388018	SIG
Windows x86 executable installer	Windows		3811c6d3203358e0c0c6b6677ae980d3	30584520	SIG
Windows x86 web-based installer	Windows		39c2879cecf252d4c935e4f8c3087aa2	1287056	SIG

Figure 1: 安装文件

```python
1 language = "python"
2 if language == "python":
3     print("Hello Python!")
4 else:
5     print("Hello World!")
6
```

Figure 2: python 语法

```cpp
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 int main(void) {
5     string language = "c++";
6     if (language == "c++") {
7         cout << "Hello C++!\n" << endl;
8     }
9     else {
10         cout << "Hello World!\n" << endl;
11     }
12 }
```

Figure 3: C/C++ 语法

- num = 123
- string = 'abc'
- tp = (1,2,3)
- li = [1,2,3]
- chars = {'a', 'b', 'c', 'd'}
- dic = {'height':10, 'width':20}

- type(num) # int
- type(string) # str
- type(tp) # tuple
- type(li) # list
- type(chars) # set
- type(dic) # dict

- li = []
- li = [1,2,3]
- li = ['l','o','v','e']
- li = [1,'love',3]
- li = list()
- li = list((1,'love',3))