

Learning Python

by laike9m

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<https://github.com/laike9m>

Python

['paɪθən]

Guido van Rossum

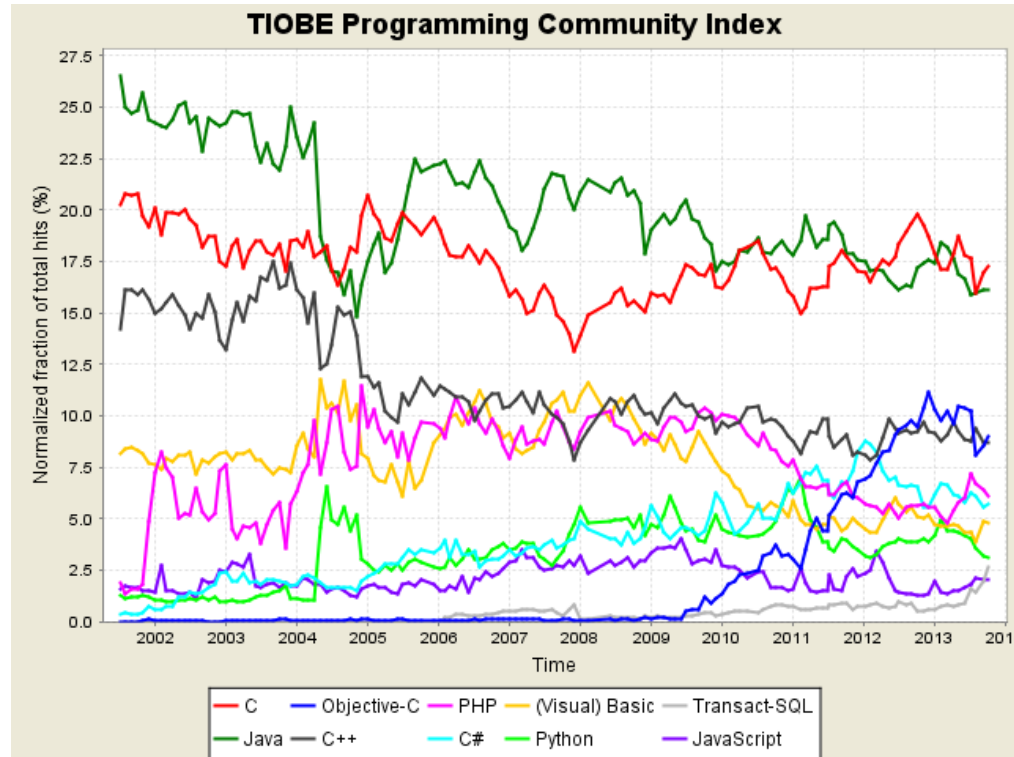


<http://www.python.org/~guido/>

为什么要学习Python

| Position Oct 2013 | Position Oct 2012 | Delta in Position | Programming Language | Ratings Oct 2013 | Delta Oct 2012 | Status |
|-------------------|-------------------|-------------------|----------------------|------------------|----------------|--------|
| 1 | 1 | = | C | 17.246% | -2.58% | A |
| 2 | 2 | = | Java | 16.107% | -1.09% | A |
| 3 | 3 | = | Objective-C | 8.992% | -0.49% | A |
| 4 | 4 | = | C++ | 8.664% | -0.60% | A |
| 5 | 6 | ↑ | PHP | 6.094% | +0.43% | A |
| 6 | 5 | ↓ | C# | 5.718% | -0.81% | A |
| 7 | 7 | = | (Visual) Basic | 4.819% | -0.30% | A |
| 8 | 8 | = | Python | 3.107% | -0.79% | A |
| 9 | 23 | ↑↑↑↑↑↑↑↑ | Transact-SQL | 2.621% | +2.13% | A |
| 10 | 11 | ↑ | JavaScript | 2.038% | +0.78% | A |
| 11 | 18 | ↑↑↑↑↑↑ | Visual Basic .NET | 1.933% | +1.33% | A |

TIOBE Programming Community Index



Who use Python?

- Python在各领域的应用
<http://www.python.org/about/success/>
- **Google** - 谷歌在很多项目中用Python作为网络应用的后端，如Google Groups、Gmail、Google Maps等，Google App Engine支持python作为开发语言
- **豆瓣** - 从一开始就把Python作为主语言
 - [Python在豆瓣的应用](#)
 - [豆瓣在python和ruby之间为何选择前者？](#)
- **NASA** - 美国宇航局，从1994年起把Python作为主要开发语言
- **gedit** - C, Python <http://en.wikipedia.org/wiki/Gedit>

这些都不是最重要的

最重要的是

Python用起来很爽

Python的特性

- Ease of Learning
- Rapid Development Cycle
- Economy of Expression
- Readability and Beauty
- One way to do it
- Interactive Prompt
- Batteries Included
- Protocols -- wsgi, dbapi, ...

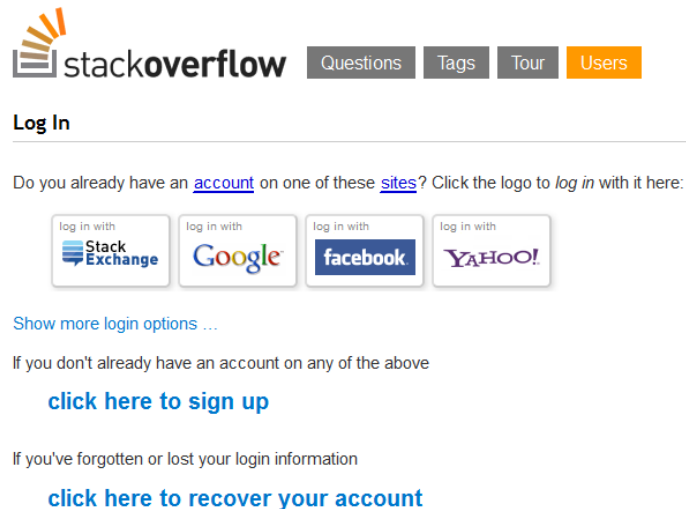
准备工作

翻墙

- 优秀的博客、论坛被墙掉
- <https://code.google.com/p/smartladder/>

申请一个Gmail账号

- 很多地方可以直接使用Gmail账号登陆
- 体现一种态度



申请一个Github账号

The screenshot shows the GitHub profile page for user 'laike9m'. The profile includes a profile picture of an anime-style girl, the username 'laike9m', an email address 'laike9m@gmail.com', and a join date of 'Oct 18, 2012'. The user has 5 followers, 0 starred repositories, and is following 7 users. The page is divided into several sections: 'Contributions', 'Repositories', and 'Public Activity'. The 'Popular repositories' section lists 'Bad-Apple-Console', 'topicons', 'split_p', 'lottery', and 'CU_login'. The 'Repositories contributed to' section lists 'wy315700/lottery', 'vh/free-programming-books', and 'nltk/nltk'. The 'Your Contributions' section features a calendar heatmap showing activity from November to October, with a total of 75 contributions. Below the heatmap, it shows a current streak of 4 days (October 20 - October 23) and a longest streak of 4 days (October 20 - October 23).

Search or type a command

Explore Gist Blog Help

laike9m

Contributions Repositories Public Activity Edit Your Profile

Popular repositories

- Bad-Apple-Console** a console program to play Bad Apple 0 ★
- topicons** topicons gnome shell extension fork 0 ★
- split_p** split images for manga reading 0 ★
- lottery** 抽奖程序 0 ★
- CU_login** 0 ★

Repositories contributed to

- wy315700/lottery** 抽奖程序 0 ★
- vh/free-programming-books** 9,419 ★
- nltk/nltk** NLTK Source 1,112 ★

Your Contributions

Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct

M
W
F

Summary of Pull Requests, issues opened and commits. [Learn more.](#) Less More

| | | |
|--|--|--|
| 75 Total Oct 23 2012 - Oct 23 2013 | 4 days October 20 - October 23 | 4 days October 20 - October 23 |
| Year of Contributions | Longest Streak | Current Streak |

申请一个stackoverflow账号

StackExchange v laike9m 95 • 10 chat meta about help [python]

stackoverflow Questions Tags Users Badges Unanswered

Tagged Questions info newest 18 featured frequent votes active unanswered

Python is a dynamically and strongly typed programming language whose design philosophy emphasizes code readability. Two significantly different versions of Python (2 and 3) are in use. Please mention the version that you are using when asking a question about Python.

learn more... | improve tag wiki | top users | synonyms (2) | python jobs

2041 votes
17 answers
377k views

The Python yield keyword explained

What is the use of the yield keyword in Python? What does it do? For example, I'm trying to understand this code (**):
`def node_get_child_candidates(self, distance, min_dist, max_dist): if ...`

python iterator generator yield

asked Oct 23 '08 at 22:21
Alex S. 12.7k • 7 • 28 • 42

1387 votes
8 answers
184k views

What is a metaclass in Python?

I've mastered almost all the Python concepts (well, let's say they're just OO concepts :-)) but this one is tricky. I know it has something to do with introspection but it's still unclear to me. So ...

python oop metaclass python-datamodel

asked Sep 19 '08 at 6:10
e-satis 120k • 53 • 166 • 227

1090 votes
11 answers
242k views

How can I make a chain of function decorators in Python?

How can I make two decorators in Python that would do the following. @makebold @makeitalic def say(): return "Hello" which should return <i>Hello</i> I'm not ...

python decorator

asked Apr 11 '09 at 7:05
Imran 17.2k • 7 • 47 • 86

Ask Question

231,426 questions tagged python about »

Related Tags

- django × 24758
- python-2.7 × 7630
- list × 7018
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- dictionary × 4047
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- windows × 3017
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- multithreading × 2667
- sqlalchemy × 2603

学会使用Google,而不是百度

- 百度不是不能用，要看用来做什么
- Google在专业搜索方面更强
- 尽可能在搜索时使用英文
- 适应阅读英文

Lets get started

Windows

- 虚拟机演示
- 建议，使用3.3+ or 2.7版本
- <https://www.python.org/ftp/python/>

Linux

- 自帶Python2.7 or 2.6 (Ubuntu13.04以上自帶Python3.3.1)
- 虚拟机演示： apt系， 安装Python3.3.2

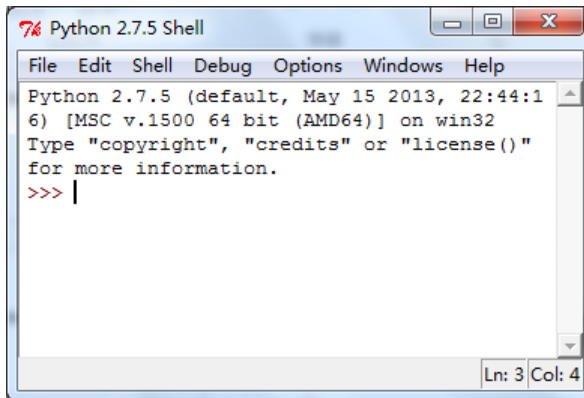
```
wget http://python.org/ftp/python/3.3.2/Python-3.3.2.tar.bz2
tar xf Python-3.3.2.tar.bz2
cd Python-3.3.2
./configure --prefix=/usr/local
make && sudo make altinstall
```

- yum系安装， 参考：

<http://stackoverflow.com/questions/8087184/installing-python3-on-rhel>

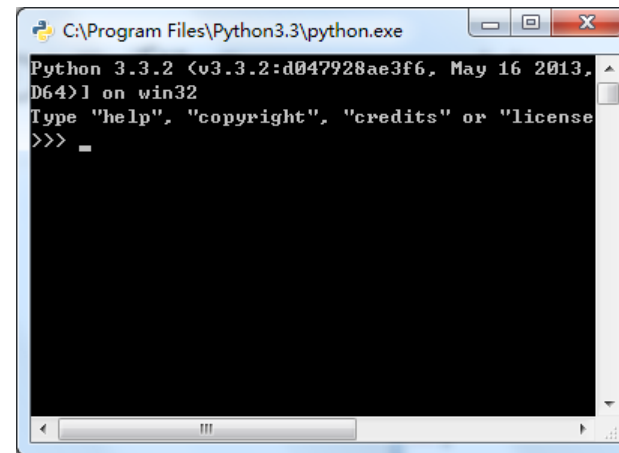
IDLE 和 Command line

REPL: read evaluate print loop



A screenshot of a Windows command prompt window titled "Python 2.7.5 Shell". The window has a menu bar with "File", "Edit", "Shell", "Debug", "Options", "Windows", and "Help". The text inside the window reads: "Python 2.7.5 (default, May 15 2013, 22:44:16) [MSC v.1500 64 bit (AMD64)] on win32", "Type \"copyright\", \"credits\" or \"license()\" for more information.", and a prompt ">>> |". The status bar at the bottom right shows "Ln: 3 Col: 4".

```
Python 2.7.5 Shell
File Edit Shell Debug Options Windows Help
Python 2.7.5 (default, May 15 2013, 22:44:16) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> |
Ln: 3 Col: 4
```



A screenshot of a Windows command prompt window titled "C:\Program Files\Python3.3\python.exe". The window has a menu bar with "File", "Edit", "Shell", "Debug", "Options", "Windows", and "Help". The text inside the window reads: "Python 3.3.2 <v3.3.2:d047928ae3f6, May 16 2013, D64>] on win32", "Type \"help\", \"copyright\", \"credits\" or \"license\" for more information.", and a prompt ">>> |". The status bar at the bottom right shows "Ln: 3 Col: 4".

```
C:\Program Files\Python3.3\python.exe
Python 3.3.2 <v3.3.2:d047928ae3f6, May 16 2013, D64>] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> |
Ln: 3 Col: 4
```

Vim 和 IDE

- 实际写代码，不可能用IDLE和command line
- 使用Vim或者IDE
- <http://stackoverflow.com/questions/81584/what-ide-to-use-for-python>
- 用得较多： Vim, Sublime, eclipse+PyDev, PyCharm

Install Package





- <https://pypi.python.org/pypi>
- 推荐使用pip: <https://pypi.python.org/pypi/pip/>
Python3.4自帶pip, 其它版本需要自行安装
- 最普遍的方法: `python setup.py install`
- Windows下: exe,msi安装包

- 演示, 安装pip, 安装另一个package, 卸载package

Learning Python – online tutorial

- <http://www.codecademy.com>

Looking to learn a specific language or library?

| | | |
|--|---|---|
|  <p>jQuery</p> <p>jQuery uses JavaScript to easily build interactive websites. Learn animation, events and DOM manipulation.</p> |  <p>JavaScript</p> <p>Learn how to make your websites interactive and how to build browser based games.</p> |  <p>PHP</p> <p>PHP is the most popular server-side language and it requires minimal set-up.</p> |
|  <p>Python</p> <p>Learn the fundamentals of programming to build web apps and manipulate data.</p> |  <p>Ruby</p> <p>Ruby is a powerful yet beginner-friendly language used for professional web apps all over the world.</p> | |

Codecademy

The screenshot shows the Codecademy interface for a Python lesson. On the left, a sidebar contains the lesson title "Python Syntax" (3/16) and a "Data Types" section. The main content area displays text explaining data types in Python, including examples of integers, floats, and booleans. On the right, a code editor shows a Python script named "script.py" with five lines of code. At the bottom, there are buttons for "Save & Submit Code" and "Reset Code".

Python Syntax 3/16

Data Types

Great! We can now summon the value `10` by calling out the name `my_variable` whenever we need it.

In this case, the **data type** of `my_variable` is an **integer** (a positive or negative whole number). There are three data types in Python that are of interest to us at the moment: integers (**int** in Python language), **floats** (fractional numbers written with a decimal point, like `1.970`), and **booleans** (which can be `True` or `False`).

Computer programs, in large part, are created to manipulate data. Therefore, it's important to understand the different types of data (or "datatypes") that we can incorporate into our programs.

```
1 #Set the variables to the values listed in the instructions!
2 my_int = 7
3 my_float = 1.23
4 my_bool = True
5
```

Save & Submit Code Reset Code

Never use quotation marks (") or single quotes (') with booleans. [Q&A Forum](#) [Glossary](#)

- 对于有其它语言基础的人，一周内完全能够完成
 - 了解基础语法，基本技巧
- Python很好学 \neq Python很容易掌握

An example

- 任务：产生一个[1,4,9,16,...]的列表供之后使用

```
i = 0
L = []
while i < n:
    L.append(i*i)
    i += 1
```

```
L = [i*i for i in range(n)]
```

```
L = (i*i for i in range(n))
```


Learn more ...

- 任何一个主题在网上都可以找到资料
- MOTW: <http://pymotw.com/2/contents.html>
- 高级主题:
<http://stackoverflow.com/questions/101268/hidden-features-of-python/102037>
- blog posts

当你有明确的目的，才会有学习的动力

目的：要实现的功能

到底可以用Python做什么 – 我的例子

- [DumpRenrenPosts2Markdown](#) – 人人网日志导出
- [login.py](#) – ChinaUnicom模拟登陆，断线重连
- [split_p.py](#) – 分割漫画图片
- [lottery](#) – FSD活动用的抽奖程序（with 汪洋）
- [131manhua](#) – 从131下载漫画（已失效）
- [My Blog](#) – 用Django搭建的个人网站
- [PyPunchP2P](#) – NAT穿透
- 毕业设计 – 自然语言处理， story segmentation

Become a happy Python programmer