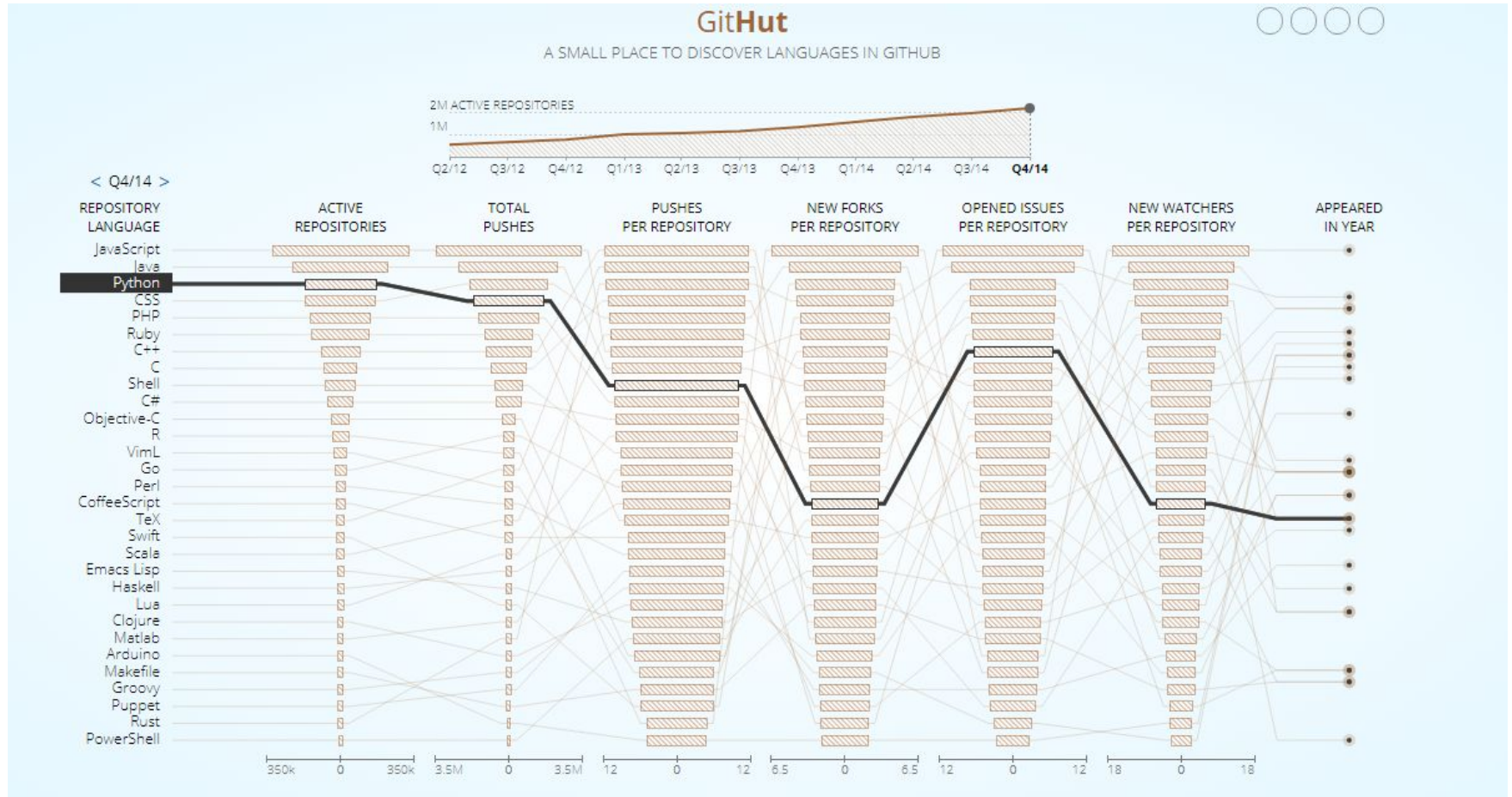


The Python Programming Language

2017

BTU - Elguja Nemsadze

Why Learn Python?



Why Learn Python?



Overview

Developer Profile

Technology

I. Most Popular Technologies

II. Most Loved, Dreaded, and Wanted

III. Technologies and Occupations

IV. Top Paying Technologies

V. Correlated Technologies

Work

Community

Methodology

Back to top

Take control of your job search.

Stack Overflow Jobs puts developers first. No recruiter spam or fake job listings.

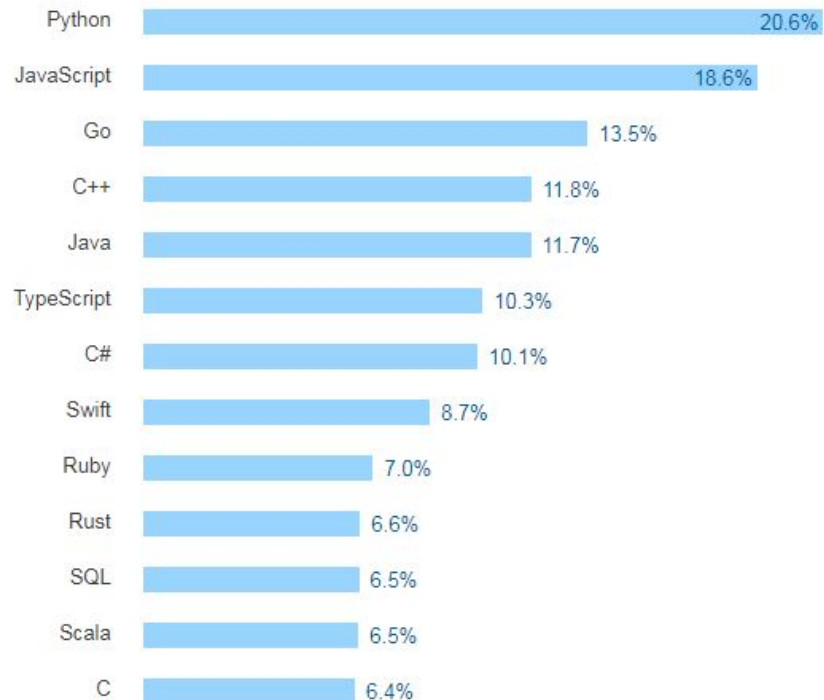
Browse jobs



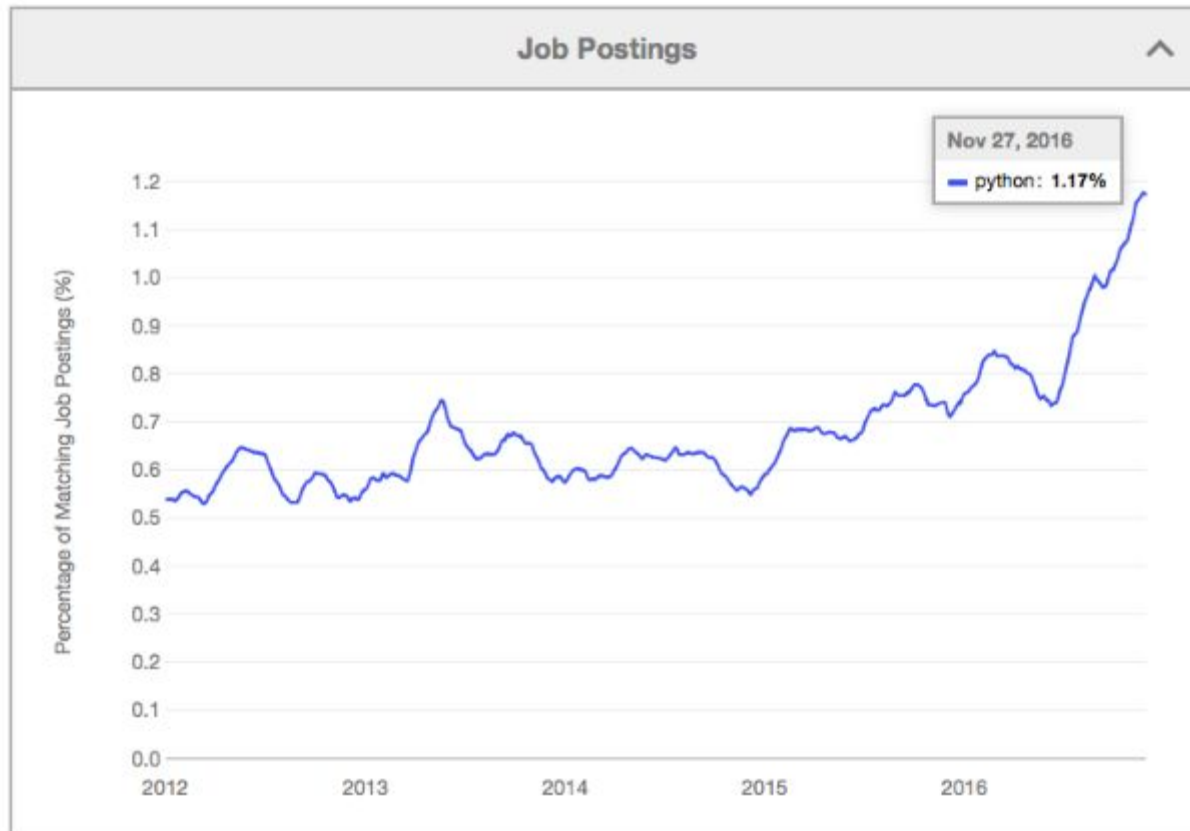
Most Loved, Dreaded, and Wanted

Most Loved, Dreaded, and Wanted Languages

Loved Dreaded **Wanted**



Why Learn Python?



Use of Python

- Education
- Scripting
- Web-development
- Testing
- GUI programming
- Glue language
- Big Data
- Machine Learning
- AI
- Automation
- Mathematical calculations (alt. to MATLAB)
- Etc...

Who uses Python?



Quora



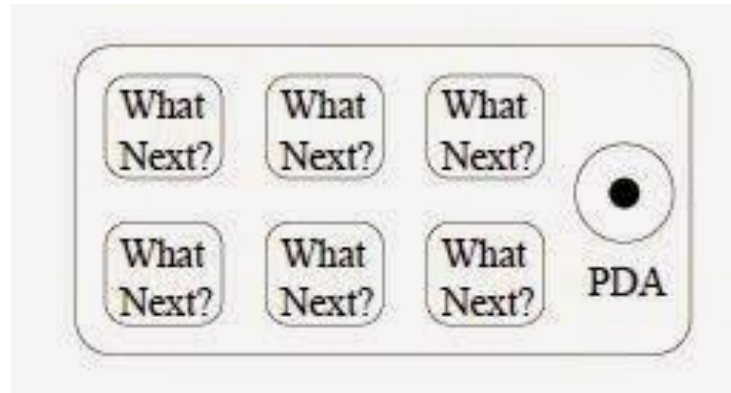
Python Community

- ["PyCon" in the United States](#)
- ["EuroPython" in Europe](#)
- ["EuroSciPy" in Europe](#)
- ["Kiwi PyCon" in New Zealand](#)
- ["PyCon Asia Pacific" in Asia](#)
- ["PyCon AR" in Argentina](#)
- ["PyCon AU" in Australia](#)
- ["PythonBrasil" in Brazil](#)
- ["PyCon Belarus" in Belarus](#)
- ["PyCon Cameroon" in Cameroon](#)
- ["PyCon Canada" in Canada](#)
- ["PyCon China" in China](#)
- ["PyCon CZ" in the Czech Republic](#)
- ["PyCon DE" in Germany](#)
- ["PyCon DK" in Denmark](#)
- ["PyCon ES" in Spain](#)
- ["PyCon Finland" in Finland](#)
- ["PyCon FR" in France](#)
- ["PyCon KR" in Korea](#)
- ["PyCon HK" in Hong Kong](#)
- ["PyCon India"](#)
- ["PyCon Iran"](#)
- ["PyCon Ireland"](#)
- ["PyCon Israel"](#)
- ["PyCon Italia" in Italy](#)
- ["PyCon Japan"](#)
- ["PyCon LT" in Lithuania](#)
- ["PyCon MY in Malaysia"](#)
- ["PyCon Philippines" in the Philippines](#)
- ["PyCon PL" in Poland](#)
- ["PyCon Russia" in Russia](#)
- ["PyCon Singapore" in Singapore](#)
- ["PyCon Sweden" in Sweden](#)
- ["PyCon SK" in Slovakia](#)
- ["PyCon Taiwan" in Taiwan](#)
- ["PyCon UK" in the United Kingdom](#)
- ["PyCon Ukraine" in Ukraine](#)
- ["PyCon Uruguay" in Uruguay](#)
- ["PyCon Venezuela" in Venezuela](#)
- ["PyCon ZA" in South Africa](#)
- ["PyData" conferences](#)
- ["Python Namibia" in Namibia](#)
- ["SciPy" in the United States](#)
- ["SciPy.in" in India](#)
- ["Swiss Python Summit" in Switzerland](#)

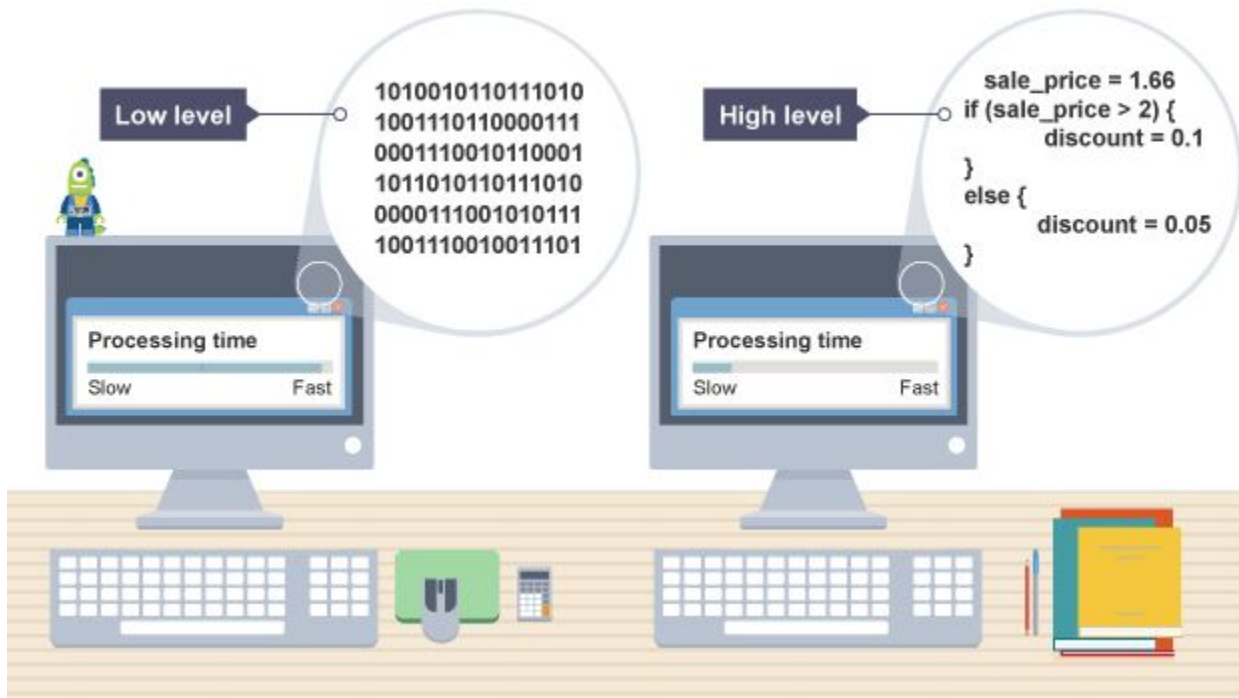


What is a Program ?

In computing, a program is a specific set of ordered operations for a computer to perform.



High and low Level Languages



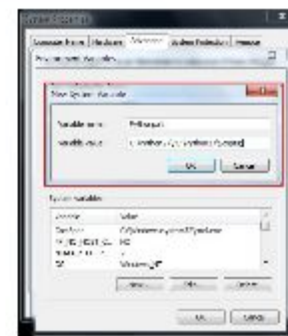
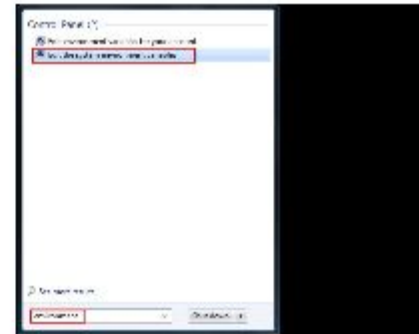
Compilation vs Interpretation

ინტერპრეტაცია	კომპილაცია
თარგმნის პროგრამას ხაზ-ხაზ. ანუ ბრძანებას ბრძანების შემდეგ.	ასკანერებს პროგრამას და შემდეგ ერთიანად თარგმნის მანქანურ კოდში.
ცოტა დრო უნდა რომ გაანალიზოს კოდი მაგრამ გაშვების დროს არის ნელი.	დიდი დრო უნდა რომ გაანალიზოს კოდი, მაგრამ გაშვების დროს არის ჩქარი.
არ გენერირდება შუალედური კოდი, ამიტომ არ საჭიროებს დიდ მეხსიერებას.	გენერირდება შუალედური კოდი რომელიც საჭიროებს მეხსიერებას.
ასრულებს კოდს სანამ არ შეხვდება პირველი შეცდომა.	ჯერ კომპილაციას უკეთებს მთელს კოდს და შემდეგ გვიჩვენებს შეცდომას.

Installing Python

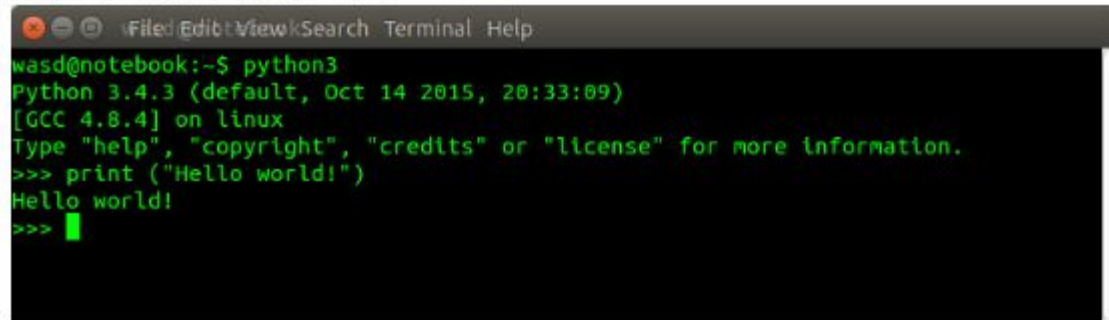
Files

Name	Opening System	Description
Nakov120409-PC Installer	File (G)	Python 3.4.1 (64-bit)
Nakov120409-PC Installer	File (G)	Python 3.4.1 (64-bit)
23020306.vcxproj	File (V)	
23020306.vcxproj.filters	File (V)	
Windows debug information files	File (V)	
Windows debug information files for Win32	File (V)	
Windows help file	File (V)	
Windows 1071-MS-DOS file	File (V)	Python 3.4.1 (64-bit)
Windows 1081-MS-DOS file	File (V)	



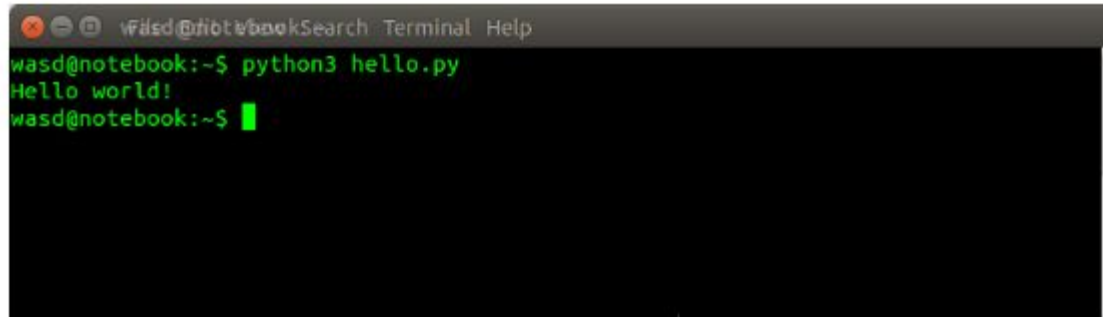
Coding modes

Interactive mode

A terminal window with a dark background and light green text. The window title is "Terminal Help". The prompt is "wasd@notebook:~\$". The user enters "python3". The terminal displays "Python 3.4.3 (default, Oct 14 2015, 20:33:09) [GCC 4.8.4] on linux" and "Type 'help', 'copyright', 'credits' or 'license' for more information." The user enters ">>> print('Hello world!)" and the terminal outputs "Hello world!". The prompt ">>>" is followed by a green cursor.

```
wasd@notebook:~$ python3
Python 3.4.3 (default, Oct 14 2015, 20:33:09)
[GCC 4.8.4] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Hello world!")
Hello world!
>>> █
```

Scripting mode

A terminal window with a dark background and light green text. The window title is "Terminal Help". The prompt is "wasd@notebook:~\$". The user enters "python3 hello.py". The terminal outputs "Hello world!". The prompt "wasd@notebook:~\$" is followed by a green cursor.

```
wasd@notebook:~$ python3 hello.py
Hello world!
wasd@notebook:~$ █
```

Program Flow

- **sequential steps**
- **conditional steps**
- **repeated steps**

Variables naming

- **Must start with letter (from a to Z) or underscore sign (_) .**
- **Followed by any number of characters including (letters, underscore signs, numbers).**
- **Must NOT include special characters or signs (@ , # , + , - ...) .**
- **Must NOT be Python keyword.**
- **Case sensitive (cat and Cat are different variable names).**

Its better to follow PEP 8. <https://www.python.org/dev/peps/pep-0008/>

Reserved Words

and	exec	not
as	finally	or
assert	for	pass
break	from	print
class	global	raise
continue	if	return
def	import	try
del	in	while
elif	is	with
else	lambda	yield
except		

Comments

Comment

'''

Multiline Comment

'''

Errors

- Syntax errors
- Logic errors
- Semantic errors