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# Agenda

- Why Python?
- Python's origins
- Main characteristics
- Advantages of Python development
- 3'rd party libraries
- Embedding C/C++

# Why Python

- Solves many needs
- Scales nicely: from small scripts to the entire backend software stack
- High adoption rate



[https://en.wikipedia.org/wiki/History\\_of\\_Python#mediaviewer/File:PythonProgLogo.png](https://en.wikipedia.org/wiki/History_of_Python#mediaviewer/File:PythonProgLogo.png)

Created in 1998 by Guido van Rossum, a dutch engineer from the Netherlands



[https://en.wikipedia.org/wiki/Guido\\_van\\_Rossum#mediaviewer/File:Guido\\_van\\_Rossum\\_OSCON\\_2006.jpg](https://en.wikipedia.org/wiki/Guido_van_Rossum#mediaviewer/File:Guido_van_Rossum_OSCON_2006.jpg)

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# BDFL

Benevolent Dictator For Life

# Main Characteristics

- Highly Readable
- Dynamic
- Interpreted
- Cross Platform
- Free and Open Source

# Highly Readable

- Python code is easily understood
- Syntax similar to written english
- Code style and aesthetics is appreciated



```
for number in range(0, 10):  
    print "the number is", number
```

```
the number is 0  
the number is 1  
the number is 2  
the number is 3  
the number is 4  
the number is 5  
the number is 6  
the number is 7  
the number is 8  
the number is 9
```

# Dynamic

- No need to declare variables

```
def sum(a, b):  
    return a + b
```

```
>>> sum(1, 5)  
6
```

```
>>> sum(1.3, 2.5)  
3.8
```

```
>> sum("AB", "C")  
"ABC"
```

# Interpreted

- No compiler
- An interpreter translates Python to specific machine code

# Cross Platform

- All major platforms (Windows, Linux, OS X)
- Experimental support for mobile (Android, iOS)

# Free and Open Source

- The main implementation of the interpreter released
  - BSD style permissive license
  - GPL compatible

# Advantages of Python development

- Rapid development
- Faster development cycles
- Stable and battle tested syntax and APIs

# 3'rd party libraries

- Rich standard library
- Many many more libraries extend it
- Diverse ecology of frameworks, libraries and software



# Embedding C/C++

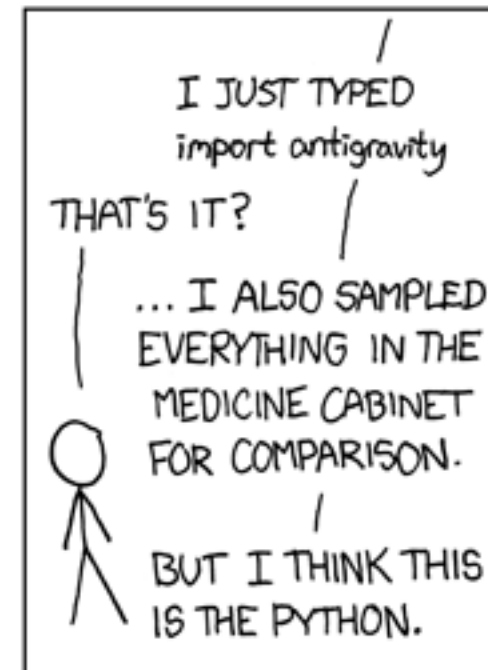
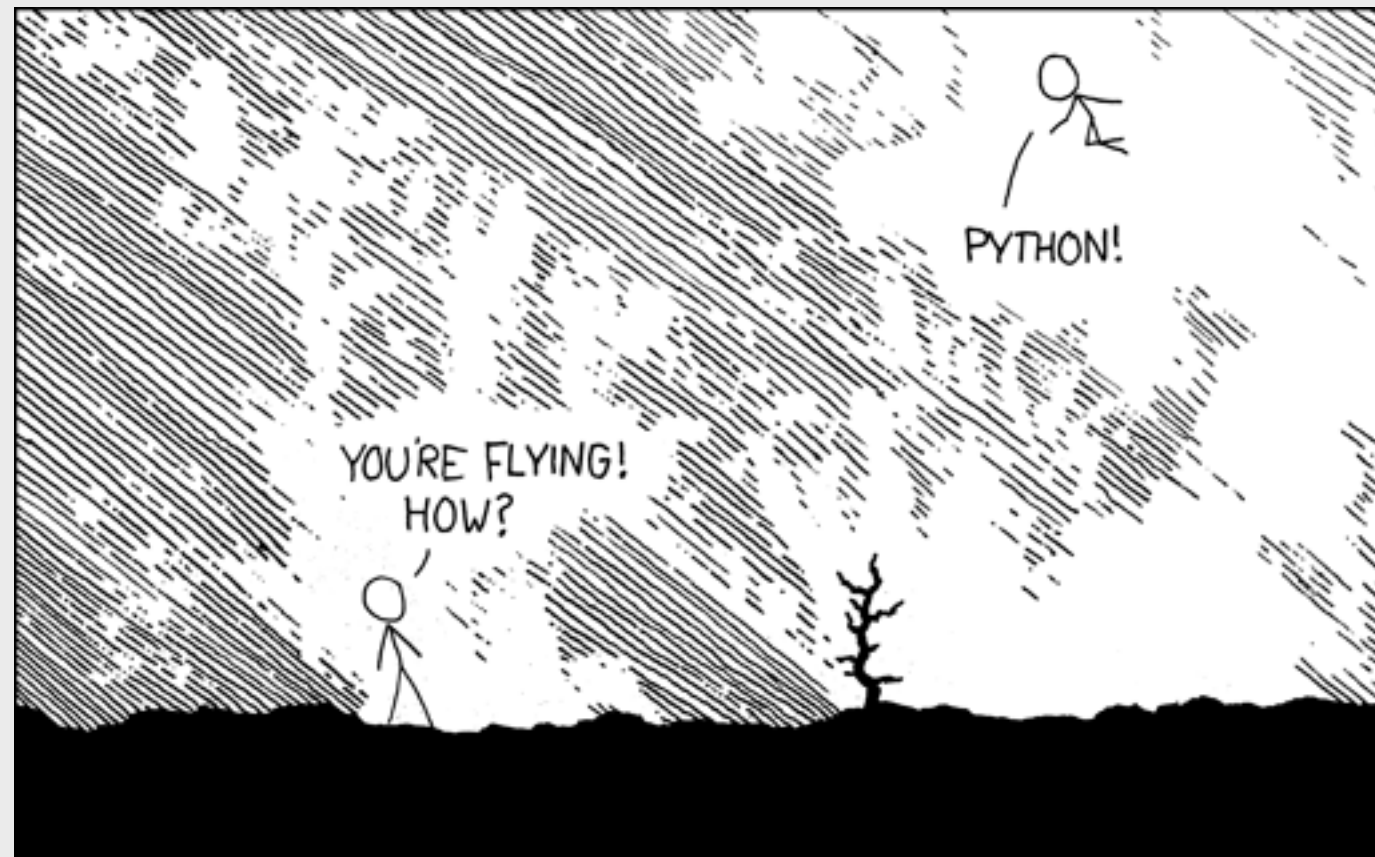
- Embedding external libraries can be easy

examplelib.cpp:

```
void simplePrint(int a) {  
    printf("a is %d\n", a);  
}
```

in python:

```
from ctypes import *  
c = cdll.LoadLibrary(' ./libexamplelib.so' )  
c.simplePrint(30)
```



<http://xkcd.com/353/>

# Q&A



<https://secure.flickr.com/photos/21560098@N06/3836926854/>

# Summary

- Python is cool
- Let's go deeper

AC.



"  
TEASE  
TLW

QUESTION  
EVERYTHING

# Thanks!

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