

# Python introduction

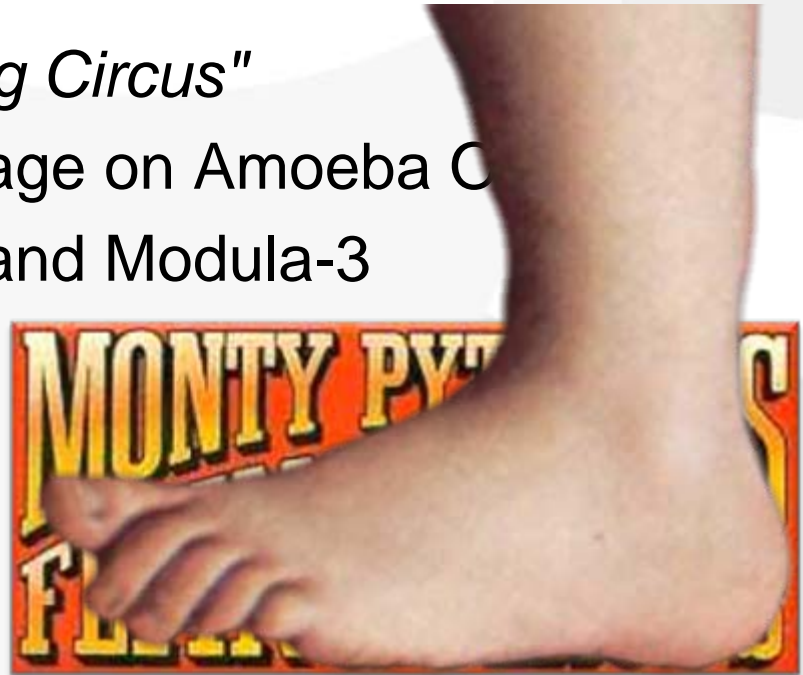
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1. History of python
2. The Python language
3. Areas of application
4. Information

# History of python

a brief history

- Invented in 1990 by Guido Van Rossum
- The name 'Python' stems from  
*"Monty Python's Flying Circus"*
- Intended to be a scripting language on Amoeba OS
- Python was influenced by ABC and Modula-3
- First public release was in 1991



# History of python

## python first steps

1991 Feb 20: [Guido announces Python](#). *This is Python, an extensible interpreted programming language that combines remarkable power with very clear syntax. This is version 0.9 (the first beta release), patchlevel 1.*

1992 May 22: [Python 0.9.6 now available for MS-DOS](#). If you don't know yet what Python is: it's an interpreted, interactive, object-oriented programming language. (Yes, I'm trying to compete with lisp, perl and tcl here!)



# History of python

## timeline

Release Date	Version	Release Date	Version
December, 1989	Implementation started	November 10, 1994	1.1.1
In the year 1990	Internal releases at CWI	April 13, 1995	1.2
February 20, 1991	0.9.0 (released to alt.sources)	October 13, 1995	1.3
February, 1991	0.9.1	October 25, 1996	1.4
Autumn, 1991	0.9.2	January 3, 1998	1.5
December 24, 1991	0.9.4	October 31, 1998	1.5.1
January 2, 1992	0.9.5 (Macintosh only)	April 13, 1999	1.5.2
April 6, 1992	0.9.6	September 5, 2000	<a href="#">1.6</a>
Unknown, 1992	0.9.7beta	<b>October 16, 2000</b>	<a href="#">2.0</a>
January 9, 1993	0.9.8	April 17, 2001	<a href="#">2.1</a>
July 29, 1993	0.9.9	December 21, 2001	<a href="#">2.2</a>
<b>January 26, 1994</b>	1.0.0	July 29, 2003	<a href="#">2.3</a>
February 15, 1994	1.0.2	November 30, 2004	<a href="#">2.4</a>
May 4, 1994	1.0.3	<i>September 16, 2006</i>	<a href="#">2.5</a>
July 14, 1994	1.0.4	October 1, 2008	<a href="#">2.6</a>
October 11, 1994	1.1	<b>December 3, 2008</b>	<a href="#">3.0</a>

# The Python language

## what is Python

### What is Python?

- Interpreted
- Interactive
- Rapid prototyping
- Functional
- Object-Oriented

programming language - not just a scripting language

## Goals

- Designed to be simple yet powerful
- Rapid application development
- Allow modular programming
- Great emphasis on readability (indentation)
- Easy to embed in and extend with other languages

## Features

- Downloadable for your operating system
- Can be used in both interactive and program mode
- Extensible through packages (easy\_install, eggs)
- Easy to embed in applications (like Lua)
- Object orientated programming approach
- Mature multithreading and network support
- Extremely portable, runs on anything:  
Unix, Windows, Mac, Linux, Win/CE, DOS, iPhone...

# The Python language features

more features

- Rapid prototyping
- Great way to start your programming experience; reads like “pseudo-code”
- Low maintenance cost
- Exception handling
- Garbage collection
- Completely FREE !  
copyrighted but use not restricted

# The Python language interfaces

Interfaces to:

- COM, DCOM, ODBC
- Most databases (MySQL, MSQL, Sybase, Oracle,...)
- Java (JPython)
- Many GUI / GFX libraries
  - platform-independent
    - Tk, wxWindows, GTK, Pyglet
  - platform-specific
    - MFC, MacOS, X11

# The Python language comparisons

## Comparisons

### Vs perl

- Easier to learn
- More readable
- Fewer side effects
- Less Unix bias

### Vs Tcl

- Much faster
- Less need for C extensions
- Better java integration

## Comparisons (continued)

### Vs java

- More concise code
- Dynamic typing
- Runs slower but development is fast
- No native-code compilation
- Can be integrated with java using JPython

## Web frameworks

- Django

a high-level Python Web framework that encourages rapid development and clean, pragmatic design



- Pylons

a lightweight Web framework emphasizing flexibility and rapid development



- TurboGear

the rapid Web development megafam  
Combines [CherryPy](#), Kid, SQLAlchemy and [MochiKit](#)



- Zope

Being the granddaddy of Python web frameworks, Zope has a family of frameworks over the years



## Content Management Systems

- Zope

The most established Python-based content management systems are those derived from [Zope](#), notably [Plone](#) and [Silva](#)



- KPAX

is a complete CMS solution based on [web2py](#). It provides wikis, blogs, news, rss feeds, surveys, assignments, web pages, versioning, group based roles, Central Authentication System, upload and downloading media streaming, embedded media player, wysiwyg editor, ajax search, customizable templates.

- Pinax

A platform for rapidly designing websites



## 2D/3D libraries

- pyglet (multiplatform, opengl)
- pyGame (windows)
- Panda3D (windows, used by Disney Games)



## Mutli-platform GUI toolkits

- wxPython (interface to wxWidgets)
- TkInter (interface on Tcl/Tk)





# Areas of application other use

But also

- Glue different languages together
- Graphical applications
- Database applications
- Multimedia applications
- Internet protocol applications
- general network applications



We will be using during the training:

- Eclipse IDE + PyDev + ADT
- Python 2.5.4

Download before the training from

<http://cxa.sit.rp.edu.sg/pages/software.php>

- Training : 13 June at Republic Polytechnic
- Before lunch : intro to python, IDE
- After lunch : go in to modules you might want to use in the competition by using examples.
- For more information and updates on the training, please check ( these slides are available here )

<http://cxa.sit.rp.sg>

Python Homepage

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

Python Tutorial

<http://www.python.org/tut>

Python documentation

<http://www.python.org/doc>

Online free PDF

<http://greenteapress.com/thinkpython/thinkpython.pdf>

# Questions ?



# THANK YOU !