History of PL

python

History

PASCAL
COBOL
FORTRAN
C
C++
PYTHON
- IOS

JAVA
Oracle(DataBase)
.net

SDLC

- Software development Life Cycle
- 1.Requirement
- 2.Analysis
- 3.Coding
- 4.Testing
- 5.Deployement

Where do you stand with python

- SDLC
- 3.Coding
- 4.Testing
- 5.Deployement
- 6.Training

Different Areas of presence

- **Contents**
- Applications Written in Python
  - 3D CAD/CAM
  - Audio/Video Applications
  - Console Applications
  - Enterprise Applications
  - File Formats
  - Image Applications
  - Internet Applications
  - Mobile Applications
  - Office Applications
  - Personal Information Managers
  - Science and Education Applications
  - Software Development
  - System Administration Applications
  - X-Window Manager
  - Unclassified

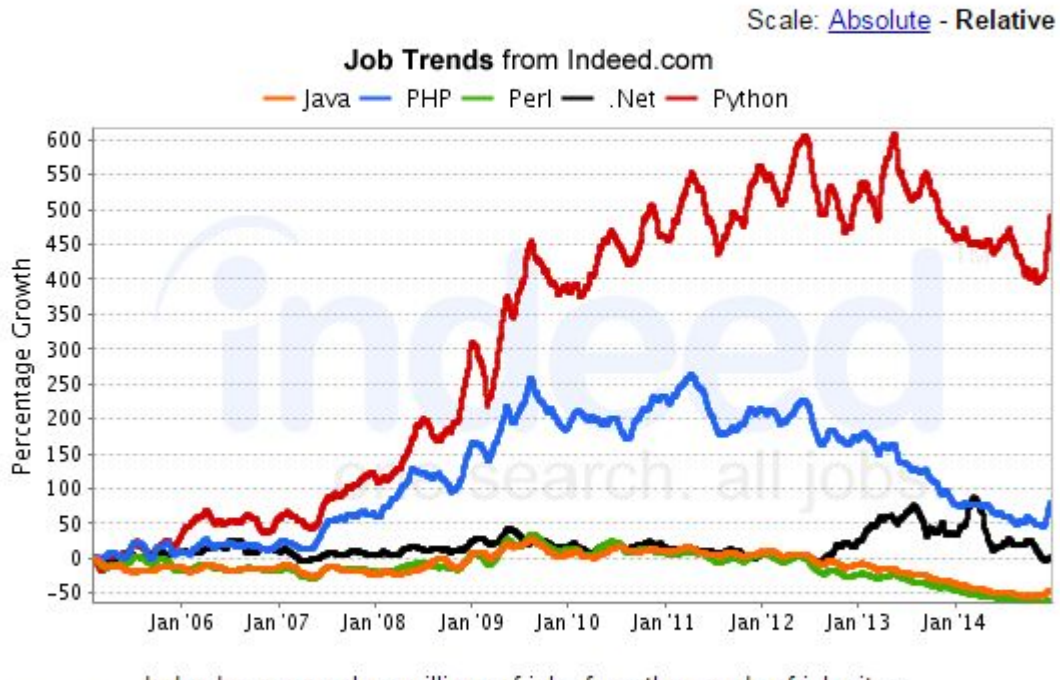
Companies which uses Python

- Yahoo Maps
- Yahoo acquired Four11, whose address and mapping lookup services were implemented in Python. Yahoo Maps still uses Python today, as can be seen by examining its URLs.
- Google
- Many components of the Google spider and search engine are written in Python (mentioned on Slashdot).
- Ultraseek
- Ultraseek Server, a commercial search engine product, is implemented as an elaborate multi-threaded Python program with primitive indexing and search operations performed by a built-in module. Most of the program is written in Python,
- Linux Weekly News
- Linux Weekly News is published using a Web application written in Python using the Quixote framework.
- Movieplayer.it
- Movieplayer.it is an italian web portal providing a huge database on cinema with movies, TV series, characters, DVD and Blu-Ray sheets, as well as continuos updates on everything related to current events and news of cinema and television world.
- Battlefield 2
- Battlefield 2 uses python to implement core elements of the gameplay such as score keeping and team balancing. Check out the BF2 Tech Wiki for sample BF2 Python scripts and information about API.
- Applied Maths
- Applied Maths is using Python in their bioinformatics software suite BioNumerics to automate series of actions that are executed repeatedly, to create custom reports, to import and export non-standard formats, to perform custom calculations, etc.
- NASA
- Johnson Space Center uses Python in its Integrated Planning System as the standard scripting language. Efforts are underway to develop a modular collection of tools for assisting shuttle pre-mission planning and to replace older tools written in Perl and shell dialects. Python will also be installed in the new Mission Control Center to perform auxiliary processing integrated with a user interface shell. Ongoing developments include an automated grammar based system whereby C++ libraries may be interfaced directly to Python via compiler techniques. This technology can be extended to other languages in the future.
- Red Hat
- The Red Hat Linux distribution uses Python for its installer (anaconda) and configuration utilities.
- SGI, Inc.
- SGI is using Python for its Linux installer, for various SGI Linux products (such as for clustering, ISP, system console, failsafe, workstation and servers). This installer is derived from the Red Hat Anaconda installer.

Job statistics

- INDEED

Java, PHP, Perl, .Net, Python Job Trends



TECHNOLOGY COMPANIES

SCENERIO

- Startups
- Mid level companies switch to open source
- MNCs for upgradation
- Third Party SaaS
- Server platform providers (SAAS)

Why to use open source Platform

- Finance (free and open source NO LICENCE)
- Human resource (plenty java and non-others)
- Free code samples (join the dots)
- Skills upgradation for coding(set up environ)
- Free jars and Frameworks
- Plenty of tutorials (anti-microsoft way (first pay me then use my product))
- Freelance option
- Apps development with integration to android and Blackberry (Cross-Platform Technology , UI desing ,Concept takers)

Python

Syllabus for Python

- Core
- Introduction
-

  History
  Features
  Setting up path
  Working with Python
  Basic Syntax
  Variable and Data Types
  Operator
  Conditional Statements
- If
  If- else
  Nested if-else
  Looping
- For
  While
  Nested loops
  Control Statements
- Break
  Continue
  Pass

  CONTINUED**********

- Adv
- OOPs concept
- Classand object
  Attributes
  Inheritance
  Overloading
  Overriding
  Data hiding
- Regular expressions
- Patterns
  CGI
- Database
- Networking
- Socket
  Multithreading
-
-

Web Frame work

Python web frame

Django

MONGODB (database)

Hadoop

Apache Hadoop is a set of algorithms (an open-source software frameworkwritten in Java) for distributed storage and distributed processing of very large data sets (Big Data) on computer clusters built from commodity hardware. All the modules in Hadoop are designed with a fundamental assumption that hardware failures (of individual machines, or racks of machines) are commonplace and thus should be automatically handled in software by the framework.

BIG DATA

Big data is a broad term for **data** sets so **large**or complex that they are difficult to process using traditional **data** processing applications. Challenges include analysis, capture, curation, search, sharing, storage, transfer, visualization, and information privacy.

Prerequists

Before proceeding with this tutorial you should have a basic understanding of Computer Programming terminologies. A basic understanding of any of the programming languages will help you in understanding the Python programming concepts and move fast on the learning track.

Python features

Python is a high-level, interpreted, interactive and object-oriented scripting language.

Python is Interpreted: This means that it is processed at runtime by the interpreter and you do not need to compile your program before executing it. This is similar to PERL and PHP.

- **Python is Interactive:** This means that you can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
- **Python is Object-Oriented:** This means that Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
- **Python is Beginner's Language:** Python is a great language for the beginner programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

HISTORY

History of Python:

Python was developed by Guido van Rossum in the late eighties and early nineties at the National Research Institute for Mathematics and Computer Science in the Netherlands.

Python is derived from many other languages, including ABC, Modula-3, C, C++, Algol-68, SmallTalk, and Unix shell and other scripting languages.

Python is copyrighted. Like Perl, Python source code is now available under the GNU General Public License (GPL).

Python is now maintained by a core development team at the institute, although Guido van Rossum still holds a vital role in directing its progress

Python Features:

Easy-to-learn: Python has relatively few keywords, simple structure, and a clearly defined syntax. This allows the student to pick up the language in a relatively short period of time.

Easy-to-read: Python code is much more clearly defined and visible to the eyes.

Easy-to-maintain: Python's success is that its source code is fairly easy-to-maintain.

A broad standard library: One of Python's greatest strengths is the bulk of the library is very portable and cross-platform compatible on UNIX, Windows and Macintosh.

Interactive Mode: Support for an interactive mode in which you can enter results from a terminal right to the language, allowing interactive testing and debugging of snippets of code.

Portable: Python can run on a wide variety of hardware platforms and has the same interface on all platforms.

Extendable: You can add low-level modules to the Python interpreter. These modules enable programmers to add to or customize their tools to be more efficient.

Databases: Python provides interfaces to all major commercial databases.

GUI Programming: Python supports GUI applications that can be created and ported to many system calls, libraries and windows systems, such as Windows MFC, Macintosh and the X Window system of Unix.

Scalable: Python provides a better structure and support for large programs than shell scripting

Install

Windows Installation:

Here are the steps to install Python on Windows machine.

- Open a Web browser and go to http://www.python.org/download/
- Follow the link for the Windows installer *python-XYZ.msi* file where XYZ is the version you are going to install.
- To use this installer *python-XYZ.msi*, the Windows system must support Microsoft Installer 2.0. Just save the installer file to your local machine and then run it to find out if your machine supports MSI.
- Run the downloaded file by double-clicking it in Windows Explorer. This brings up the Python install wizard, which is really easy to use. Just accept the default settings, wait until the install is finished, and you're ready to roll!

Setting path

Setting path at Windows:

To add the Python directory to the path for a particular session in Windows:

- **At the command prompt :** type
- path %path%;C:\Python and press Enter.

Note: C:\Python is the path of the Python directory

Major languages

- Functional
- Assembly
- C
- Oops
- Small TAlk
- JAVA
- PYTHON
- ruby

Execution of different programs

Functional and oops

Setting up class path

- Using
- Windows
- Unix
- MAC
- Solaris
- Linux

First program

```
>>> print "Hello, Python!";
```