module?

A piece of reusable code

pure python module?

A module written entirely in python and contained in a single .py file

extensions module?

A module written in the python low-level implementation language, C/C++ for python, java for Jython

modules -

/usr/local/lib/python2.7/site-packages

/Library/Python/2.7/site-packages

pip install [module]

pip uninstall [module]

pip list

What is the difference between installing modules in /usr/local/lib/python2.7 and /Library/Python/2.7?

TODO

The directory '/Users/grudkowm/Library/Caches/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

TODO

sudo -H pip install urllib3

Reference

http://docs.python.org/2/distutils/introduction.html

SEARCH PATH

Module search path

Path used by python to search for modules

sys.path

What determoines the value of sys.path

Current directory (if invoking interpretter), or directory in which script is being run (if passing script to interpretter)

PYTHONPATH

Installation dependent default

What is the installation dependent default?

What is my curren search path?

['', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python27.zip', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/plat-darwin', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/plat-mac', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/plat-mac/lib-scriptpackages', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/lib-tk', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/lib-old', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/lib-dynload', '/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/site-packages', '/Library/Python/2.7/site-packages']

Site-modules

Where you install additional packages and and reusable code

built-in module

A module which is automatcially available

/usr/local/lib/python2.7/

/Library/Frameworks/Python.framework

/Library/Python/2.7/site-packages

Global modules as opposed to user-specific modules

TODO

Given a search path, are there any cases where python won't search a directory in the path?

python ignores directories not containing a file named \_\_init\_\_.py

\_\_init\_\_.py?

Can be empty, or contain stuff.

PYTHONHOME

changing it affects the module lookup path

If bad, can't start the python interpretter

PYTHONPATH?

Used to add additional paths to the beginning of the module search string

How can you influence the python path?

Change PYTHONPATH

Create .pth files and placing them in existing search path

https://docs.python.org/2/install/

Where are third part modules installed by default?

/usr/local/lib/python2.7/site-packages

prefix / exec-prefix

directories where python is installed, and where it finds its libs at runtime

How to determine values of prefix and exec-prefix

start python

import sys

sys.prefix

sys.exec\_prefix

What if sys.exec\_prefix

What algorithm does python use when searching for modules?

INSTALLATION

manual installation

setup.py

Used to install a downloaded installation

Whereas something like pip will run this automatically after downloading desired package, you can run this manually if downloading software outside of a package manager

pip

intended as an improvement of easy-install

Where does pip install it's packages?

Appears to be installing in /usr/local/lib/python2.7/site-packages

pip

pip install foo

pip install --upgrade foo

pip install foo==version

pip list

Why do some libraries get installed in /usr/local/lib/python2.7?

/usr/local/lib/python2.7/

python py files

/usr/local/lib/python2.7/site-packages

Python modules

Difference between pip and pip2 and pip2.7?

easy\_install

python package manager

predecessor of pip

pypi

python package index

package repository for python third party packages

site module

site.USER\_BASE

Package

Folder containing modules and possibly sub packages

File types

pyc

compiled bytecode

pyo

pyc file compiled with optimizations on

pth