ensurepip — Install the Python Package Installer

Purpose: Install pip, the Python package installer.

While Python is the "Batteries Included" programming language and comes with a wide variety of modules in the standard library, there are even more libraries, frameworks, and tools available to be installed from the [Python Package Index](). To install those packages, a developer needs the installer tool pip. Installing a tool meant to install tools presents an interesting bootstrapping issue, which ensurepip solves.

Installing pip

This example uses a virtual environment configured without pip installed.

```
$ python3 -m venv --without-pip /tmp/demoenv
$ ls -F /tmp/demoenv/bin

activate
activate.csh
activate.fish
python@
python3@
```

Run ensurepip from the command line using the -m option to the Python interpreter. By default a copy of pip that is delivered with the standard library is installed. This version can then be used to install an updated version of pip. To ensure a recent version of pip is installed immediately, use the --upgrade option with ensurepip.

```
$ /tmp/demoenv/bin/python3 -m ensurepip --upgrade

Ignoring indexes: https://pypi.python.org/simple
Collecting setuptools
Collecting pip
Installing collected packages: setuptools, pip
Successfully installed pip-8.1.1 setuptools-20.10.1
```

This installs pip3 and pip3.5 as commands in the virtual environment, with the setuptools dependency needed to support those commands.

```
$ ls -F /tmp/demoenv/bin

activate
activate.csh
activate.fish
easy_install-3.5*
pip3*
pip3.5*
python@
python3@
```

> ### See also
>
> - [Standard library documentation for ensurepip]()
> - [venv]() – Virtual environments
> - **[PEP 453]()** – Explicit bootstrapping of pip in Python installations
> - [Installing Python Modules]() – Instructions for installing extra packages for use with Python.
> - [Python Package Index]() – Hosting site for extension modules for Python programmers.
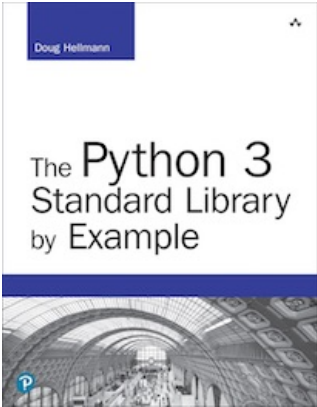> - [pip]() – Tool for installing Python packages.

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The output from all the example programs from PyMOTW-3 has been generated with Python 3.7.1, unless otherwise noted. Some of the features described here may not be available in earlier versions of Python.
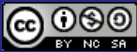
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