

### What is a virtual environment?

A virtual environment is a Python tool for dependency management and project isolation. They allow Python site packages (third party libraries) to be installed locally in an isolated directory for a particular project.

### Most Popular Virtual Environment Manager

virtualenv	The most popular and work with Python 2 and 3
venv	A standard library, similar to virtualenv shipped with Python 3
virtualenvwrapper	A set of extensions to virtualenv. Useful when using multiple virtualenv directories.
pipenv	Less popular, It automatically creates and manages a virtualenv for your projects by combining Pipfile, pip and virtualenv into one command on the command-line.
poetry	Similar to pipenv
conda	Included in all versions of Anaconda and Miniconda. Anaconda brings many of the tools used in data science and machine learning with just one install.

### Using virtualenv and venv

Installing virtualenv	macOS and Linux	<code>python3 -m pip install --user virtualenv</code>
	Windows	<code>py -m pip install --user virtualenv</code>
Creating a virtual environment	macOS and Linux	<code>python3 -m virtualenv my-env</code>
	Windows	<code>py -m virtualenv my-env</code>
Activating a virtual environment	macOS and Linux	<code>source my-env/bin/activate</code>
	Windows	<code>.\my-env\Scripts\activate</code>
Leaving the virtual environment		<code>deactivate</code>
Installing packages		<code>pip install requests</code>

To use venv instead of virtualenv simply change virtualenv with venv while creating the virtual environment

### Using Pipenv

Installing Pipenv	macOS and Linux	<code>python3 -m pip install --user pipenv</code>
	Windows	<code>py -m pip install --user pipenv</code>
Install packages from Pipfile	macOS and Linux	<code>python3 -m pipenv install</code>
	Windows	<code>py -m pipenv install</code>
Add a package	macOS and Linux	<code>python3 -m pipenv install requests</code>
	Windows	<code>py -m pipenv install requests</code>
Activating a virtual environment	macOS and Linux	<code>python3 -m pipenv shell</code>
	Windows	<code>py -m pipenv shell</code>
Leaving the virtual environment		<code>exit</code>

When installing a package for the first time a virtual environment will be created automatically and it will create a Pipfile for you in your project's directory. The Pipfile is used to track which dependencies your project needs in case you need to re-install them.



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