Python Package Management with Poetry

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Goals

* Brief overview of Python Package Index

* Use poetry to start a project

* Use poetry to package an existing project

* Manage Package Dependencies

* Publish a project to PyPI

Brief Overview of Python Package Index

* https://pypi.org

* PyPI – (Pie Pee Eye)

  * Pie Pie is a different project (pypy)

* The default package repository used by **pip**

* Anybody can publish a package to PyPI!

First, Install Poetry

Install Into System Python

```
$ pip3 install poetry
```

Install Into Virtual Environment

```
$ python3 -m venv /path/to/venv

$ source /path/to/venv/bin/activate

$ pip3 install poetry
```

Create a New Package With Poetry

```
$ poetry new foolib

$ cd foolib

$ ls

README.rst   foolib/   pyproject.toml tests/
```

Package an Existing Project With Poetry

```
$ cd barlib

$ poetry init

...
```

pyproject.toml

* TOML == Tom's Obvious Minimal Language

  It's a mix between ini and yaml

* Single File Describes Your Package

  https://poetry.eustace.io/docs/pyproject/

  Way Better™ than setup.py used by setuptools

poetry.lock

* Lists project dependencies.

* Add to your git repository and track!

* Forget about it!

Add/Remove a Project Dependency

```
$ poetry add requests

...

$ poetry show

...

$ poetry remove requests

...
```

Install the Package Locally

```
$ poetry install --develop foolib

...

$ poetry shell

...
```

~~Add Bugs~~
Write Awesome Package

Publish A Package to PyPI – Register

* Register at PyPI

   https://pypi.org/account/register/

Publish A Package to PyPI — Configuration

$ poetry config repositories.testpypi https://
test.pypi.org/simple

$ poetry config http-basic.testpypi <username>
<password>

$ poetry config http-basic.pypi <username>
<password>

...

Publish A Package to PyPI – Build Package

```
$ poetry build

...
```

Publish A Package to PyPI – Do The Needful

$ poetry publish [-r <repo>]

You can publish to:

• PyPI

• Test PyPI

• Your Own Private Package Repository*

*Some assembly required.

Did It Work?

```
$ ^D  # exit from poetry shell

$ python3 -m venv test

$ source test/bin/activate

$ pip3 install foolib
```

ZOMG! It's a package on PyPI!

Packaging Resources

* https://poetry.eustace.io

* https://pypi.org

* https://packaging.python.org

* https://pypa.io

* https://github.com/jnyjny/poetry-demo.git