

Lesson 7

Python Essentials

Overview

1. Using modules
2. Packages
3. Creating modules
4. Python virtual environment

Modules Overview

- A Python file with functions, classes and other components
- Break code down into reusable structures
- They're referenced by using the import statement.

```
# import module as namespace  
import helpers  
helpers.display('Not a warning')
```

```
# import all into current namespace  
from helpers import *  
display('Not a warning')
```

```
# import specific items into current namespace  
from helpers import display  
display('Not a warning')
```

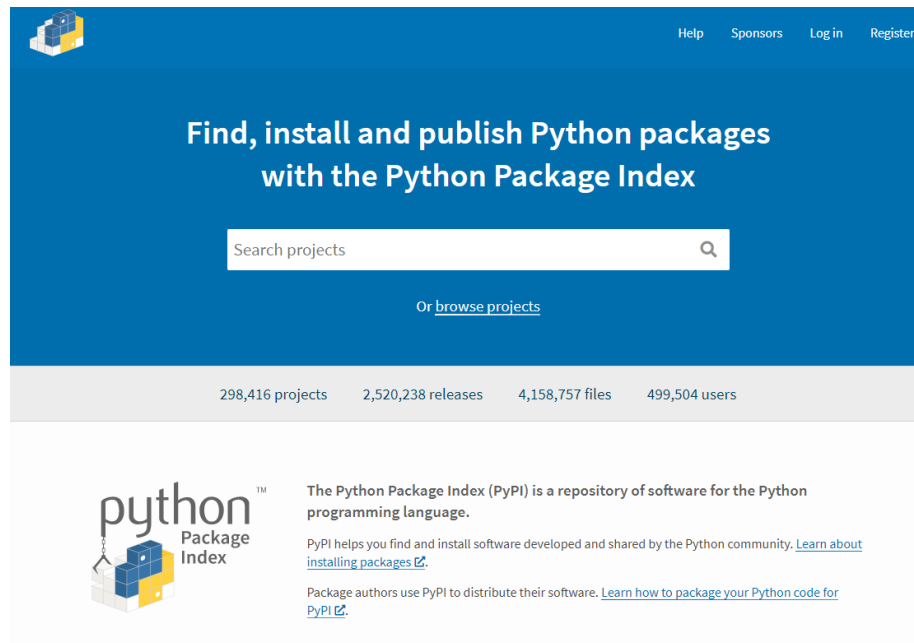
Packages

- Modules can be distributed using a Package.
- Packages are published collection of modules.
- You can publish to, and install from pypi.org.
- Install package with pip.

```
# Install an individual package
pip install colorama

# Install from a list of packages
pip install -r requirements.txt

# requirements.txt
colorama
```



Python Virtual Environment

- Isolated environment where to install your dependencies.
- Create virtual environment.

```
python -m venv .venv
```
- Activate virtual environment in VS Code.
- Activate virtual environment in command line `bash`

```
.\.venv\Scripts\activate
```
- Create Requirements file `bash`

```
python -m pip freeze > requirements.txt
```
- <https://packaging.python.org/guides/installing-using-pip-and-virtual-environments/>

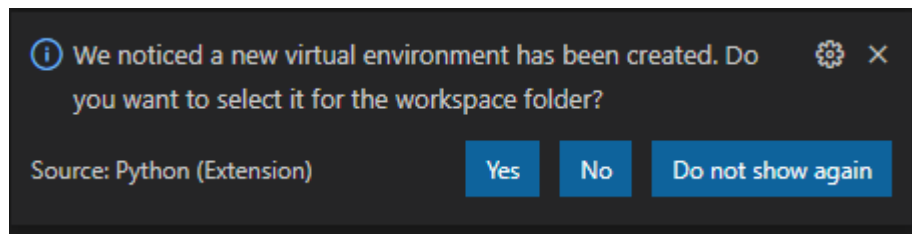


Figure 1: image

- <https://code.visualstudio.com/docs/python/debugging>
- <https://code.visualstudio.com/docs/python/environments>