

Environment Setup for Assignments

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All assignments must be run using **Python $\geq 3.12.3$** inside a **virtual environment (venv)**. Running inside a venv ensures that package versions are isolated, reproducible, and do not interfere with system Python.

You can check your Python version with:

```
python3 --version
```

1 Creating a Virtual Environment

From the project root, create and activate a virtual environment:

```
python3 -m venv venv
```

Activate it:

On macOS / Linux

```
source venv/bin/activate
```

On Windows (PowerShell)

```
venv\Scripts\Activate.ps1
```

Once activated, your shell prompt should show (venv).

2 Installing Required Packages

Install the required packages inside the virtual environment:

```
pip3 install coverage aiohttp requests
```

Or install using the given requirement file:

```
pip3 install -r requirement.txt
```

3 Running Coverage

Within the virtual environment, the `coverage` package can be executed in two equivalent ways.

3.1 Using the installed binary

During installation of the coverage package, a binary tool is also installed and added to your PATH. Hence you can run it with:

```
coverage run -m pytest  
coverage report
```

3.2 Using the Python module

This method is more robust and always uses the correct Python interpreter:

```
python -m coverage run -m pytest  
python -m coverage report
```

Both methods invoke the same `coverage` package; the second form avoids issues with incorrect PATH or mismatched Python installations.