

Effective Programming Practices for Economists

Basic Python

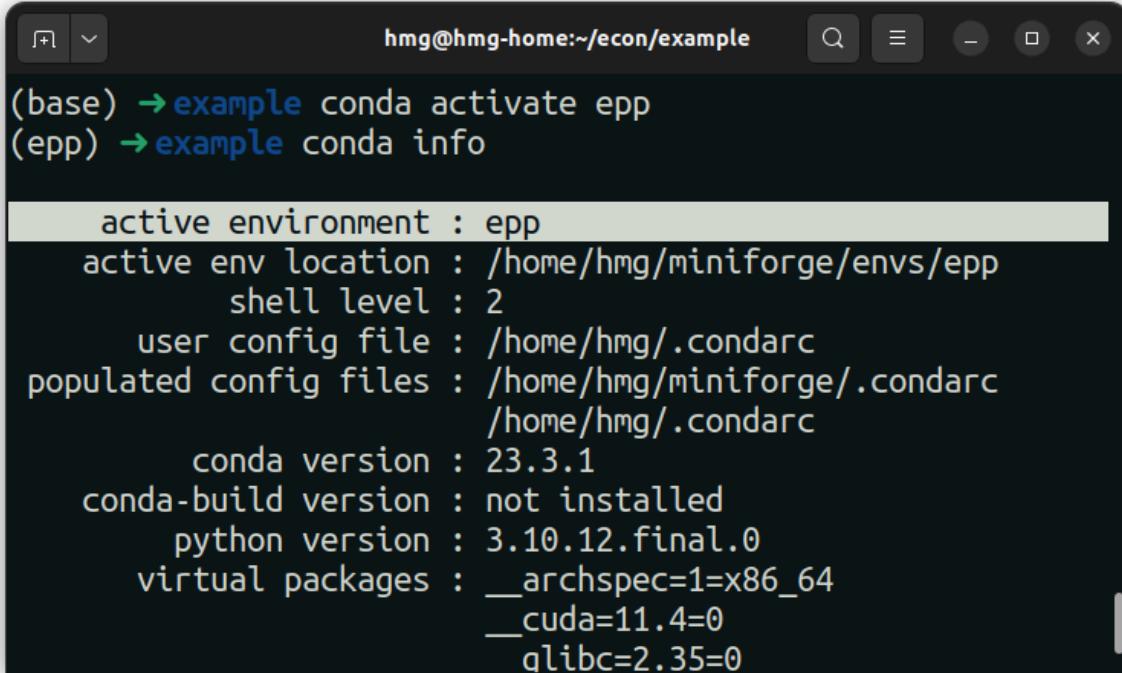
Running Python code via pytest

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Preparation

- We assume you have installed anaconda and created the course environment
- Open a shell in the root directory of your project
 - On Windows, use the anaconda prompt or the powershell
 - If conda is not recognized in the powershell, check out this [stackoverflow post](#)
- Activate the environment using `conda activate epp`
- Confirm the activation worked using `conda info`

0: Activate and Info



hmg@hmg-home:~/econ/example

```
(base) → example conda activate epp
(ep) → example conda info

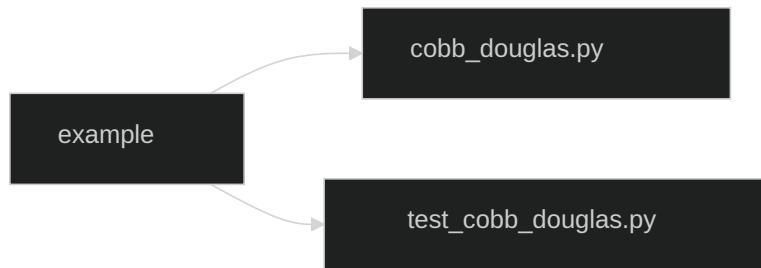
active environment : epp
active env location : /home/hmg/miniforge/envs/epp
shell level : 2
user config file : /home/hmg/.condarc
populated config files : /home/hmg/miniforge/.condarc
/home/hmg/.condarc
conda version : 23.3.1
conda-build version : not installed
python version : 3.10.12.final.0
virtual packages : __archspec=1=x86_64
                  __cuda=11.4=0
                  __qlibc=2.35=0
```

How does pytest execute code?

- Executing .py files: Run the entire file
- Executing notebooks: Run individual cells
- Pytest: Run individual functions in multiple .py files

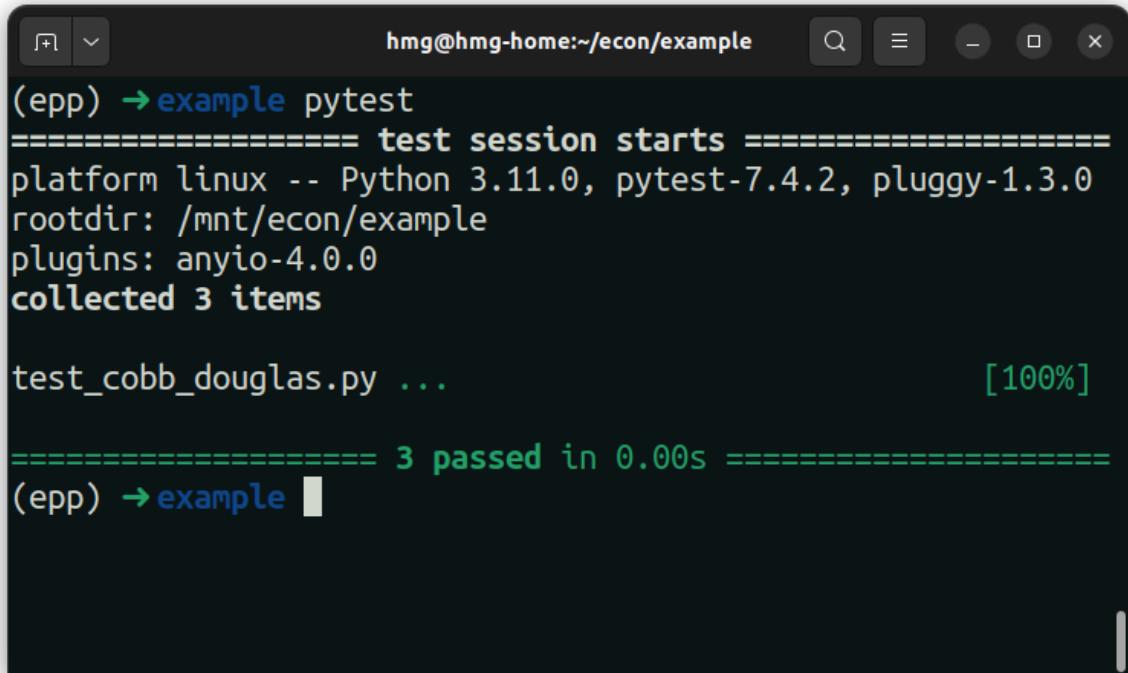
Very useful for automating test execution across an entire project

Example Project Structure



- Our shell is in the `example` directory
- We want to run all functions that start with `test_` in `test_cobb_douglas.py`
- Could be spread across multiple test files, across different subdirectories
- Command is `pytest`

1: Execute



A screenshot of a terminal window titled "hmg@hmg-home:~/econ/example". The window shows the output of a pytest command. The output indicates a test session starting on a Linux system with Python 3.11.0, pytest-7.4.2, and pluggy-1.3.0. The root directory is /mnt/econ/example. Three items were collected, and the test_cobb_douglas.py file passed at 100%. The session ends with 3 passed in 0.00s.

```
(epp) → example pytest
=====
platform linux -- Python 3.11.0, pytest-7.4.2, pluggy-1.3.0
rootdir: /mnt/econ/example
plugins: anyio-4.0.0
collected 3 items

test_cobb_douglas.py ... [100%]

=====
3 passed in 0.00s
(epp) → example █
```