

Effective Programming Practices for Economists

Basic Python

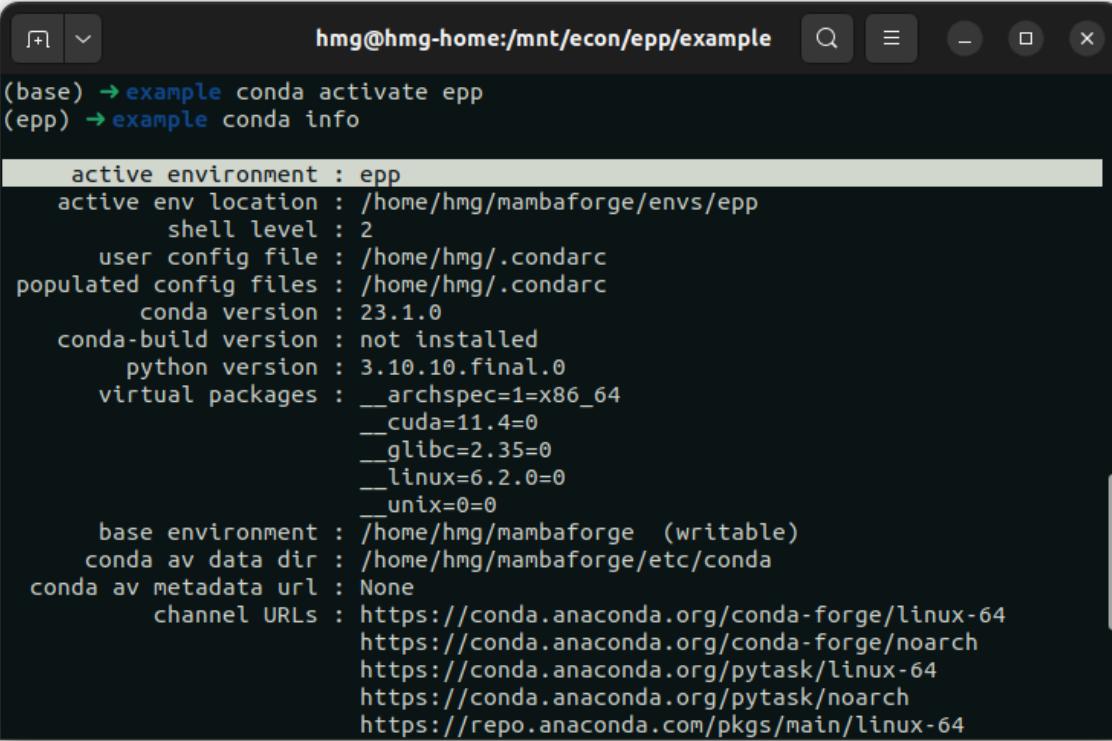
Running Python code via pytask

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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



The screenshot shows a terminal window with the following content:

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

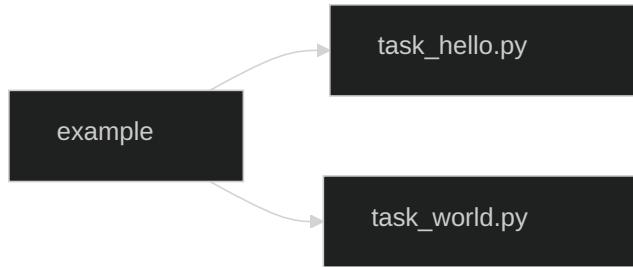
active environment : epp
active env location : /home/hmg/mambaforge/envs/epp
shell level : 2
user config file : /home/hmg/.condarc
populated config files : /home/hmg/.condarc
conda version : 23.1.0
conda-build version : not installed
python version : 3.10.10.final.0
virtual packages : __archspec=1=x86_64
                  __cuda=11.4=0
                  __glibc=2.35=0
                  __linux=6.2.0=0
                  __unix=0=0
base environment : /home/hmg/mambaforge (writable)
conda av data dir : /home/hmg/mambaforge/etc/conda
conda av metadata url : None
channel URLs : https://conda.anaconda.org/conda-forge/linux-64
                https://conda.anaconda.org/conda-forge/noarch
                https://conda.anaconda.org/pytask/linux-64
                https://conda.anaconda.org/pytask/noarch
                https://repo.anaconda.com/pkgs/main/linux-64
```

How does pytask execute code?

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

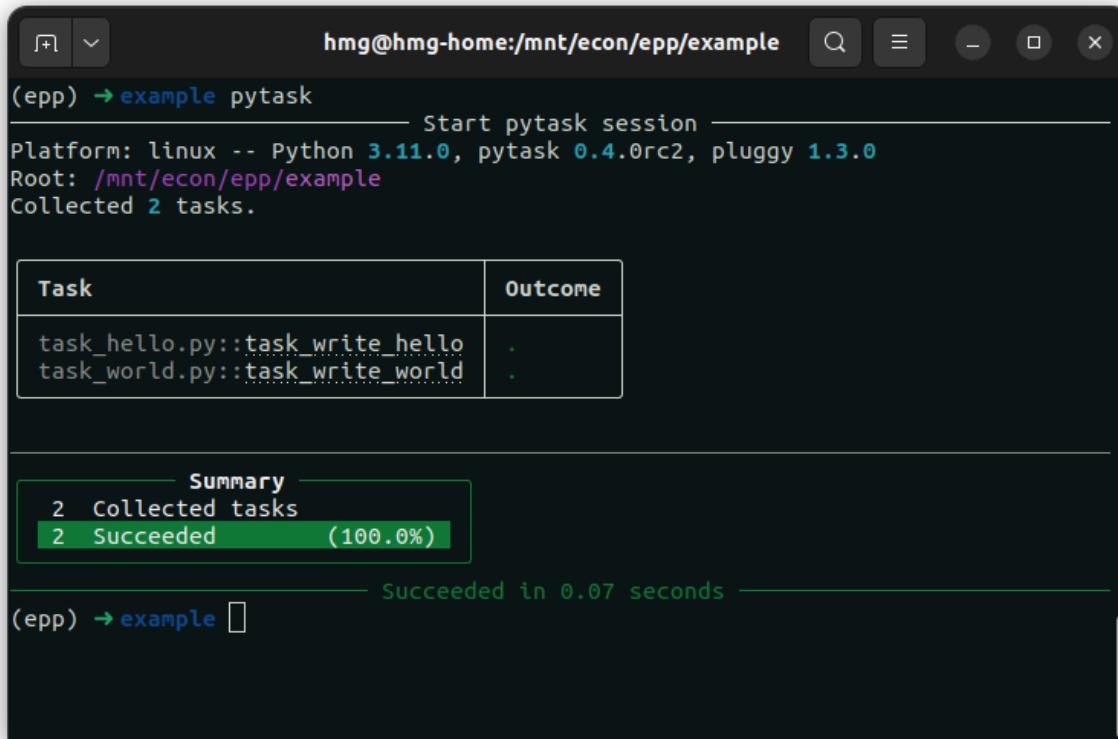
Very useful for automating research pipelines

Example Project Structure



- Our shell is in the `example` directory
- We want to run all functions that start with `task_` in both `.py` files
- Command is `pytask`

1: Execute



hmg@hmg-home:/mnt/econ/epp/example

```
(epp) → example pytask
Start pytask session
Platform: linux -- Python 3.11.0, pytask 0.4.0rc2, pluggy 1.3.0
Root: /mnt/econ/epp/example
Collected 2 tasks.
```

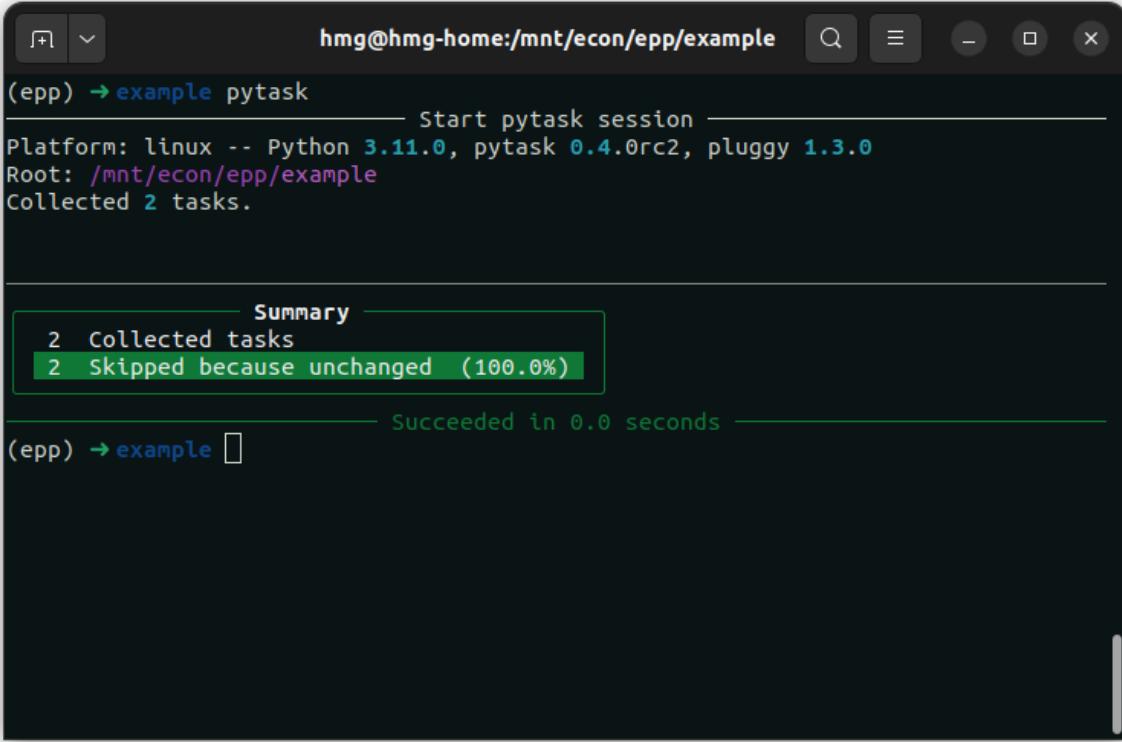
Task	Outcome
task_hello.py::task_write_hello	:
task_world.py::task_write_world	:

```
Summary
2 Collected tasks
2 Succeeded (100.0%)
```

Succeeded in 0.07 seconds

```
(epp) → example
```

1: Execute again



hmg@hmg-home:/mnt/econ/epp/example

```
(epp) → example pytask
Start pytask session
Platform: linux -- Python 3.11.0, pytask 0.4.0rc2, pluggy 1.3.0
Root: /mnt/econ/epp/example
Collected 2 tasks.
```

Summary	
2	Collected tasks
2	Skipped because unchanged (100.0%)

```
Succeeded in 0.0 seconds
(epp) → example []
```