

An Introduction to Parallel Programming in Python

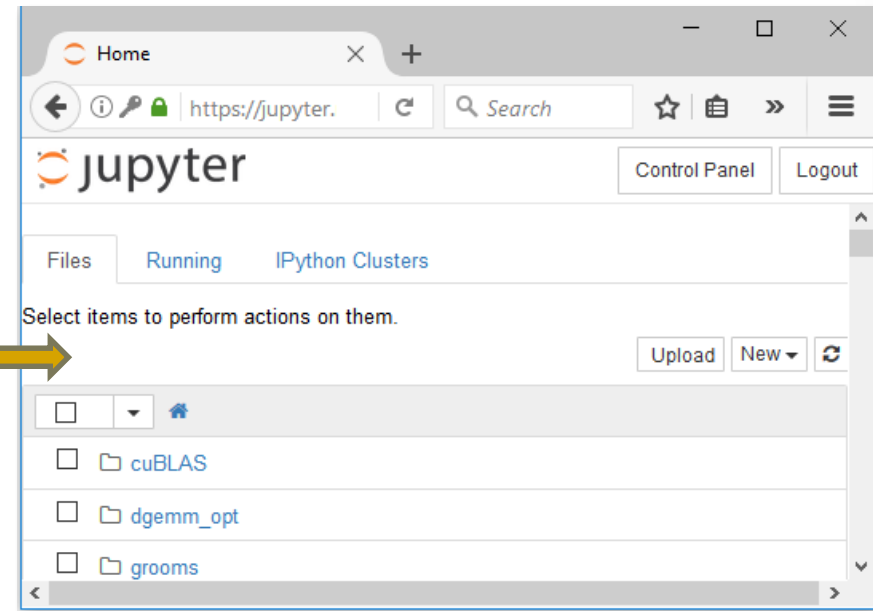
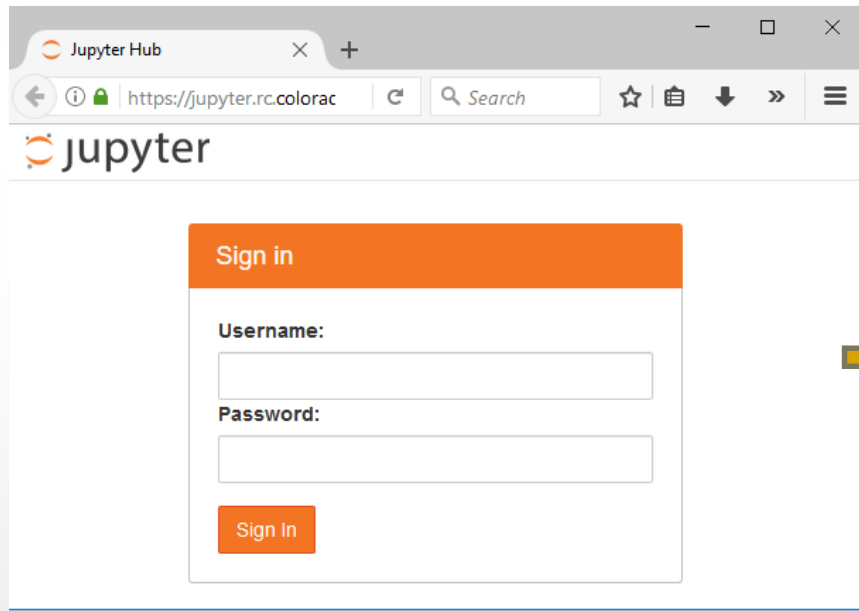
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[Web Link to These Slides](#)

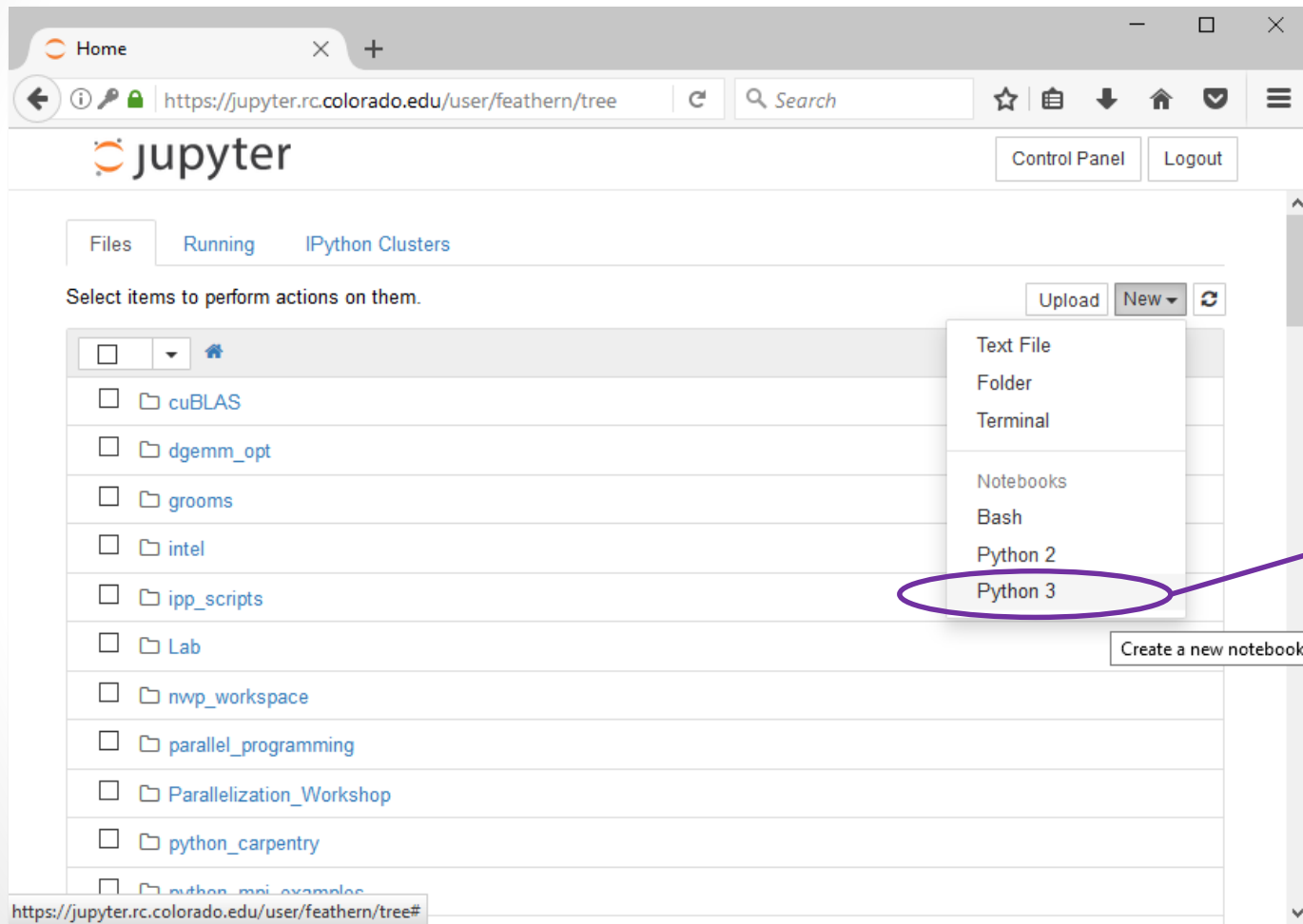
Getting Started

- Login to the RC Jupyter Hub:

`https://jupyter.rc.colorado.edu`

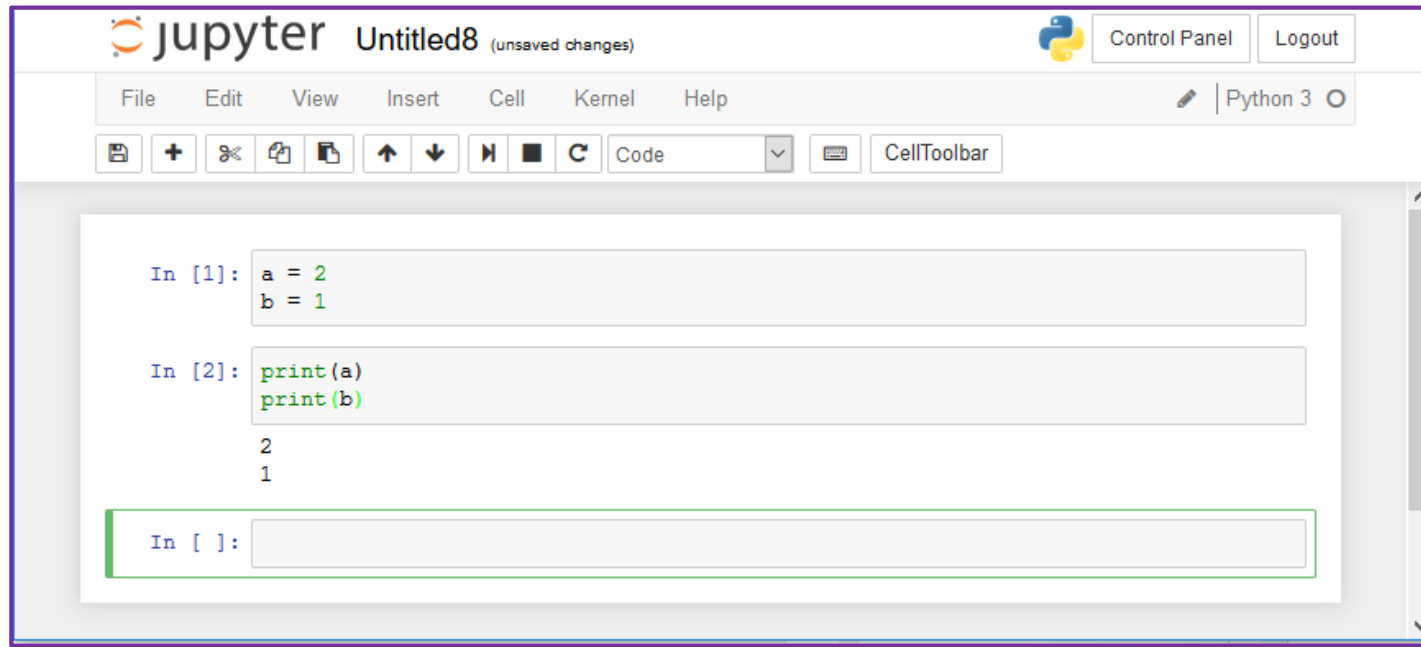


Getting Started...



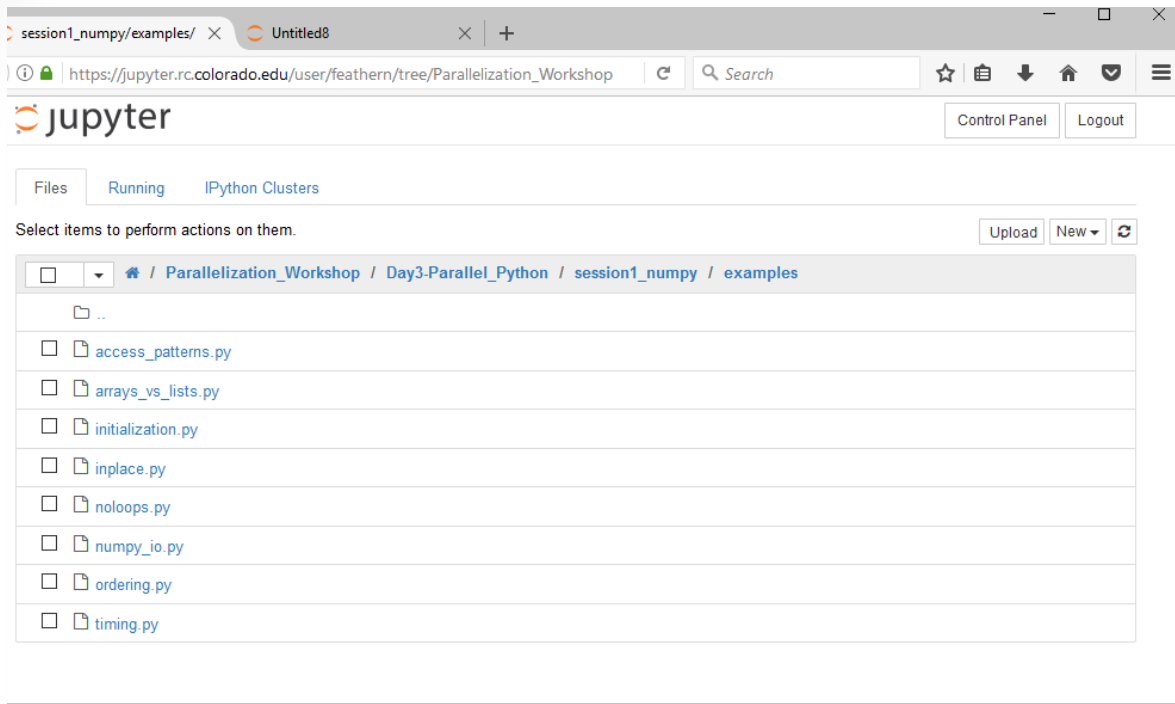
Start a Python 3
Notebook

So how does this work?



- Pressing “enter” moves to next line
- Pressing “shift” + “enter” executes code block
- Variables remain in memory between blocks...

File browser tab remains open...



Open this file:

Parallelization Workshop /
Day3-Parallel_Python /
session1_numpy /
examples /
timing.py

Workflow for today:

- Open file in file browser
- Cut + paste into notebook tab
- “shift” + “enter”

Timing in Python...

- Timing via “time” module
- Let’s look at **timing.py**
- time() returns seconds elapsed since some reference time.

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```
import time
```

usage pattern

```
t0 = time.time()
```

```
... code you want to time ...
```

```
t1 = time.time()
```

```
dt = t1-t0
```

```
print ('Calculation time in seconds: ', dt)
```