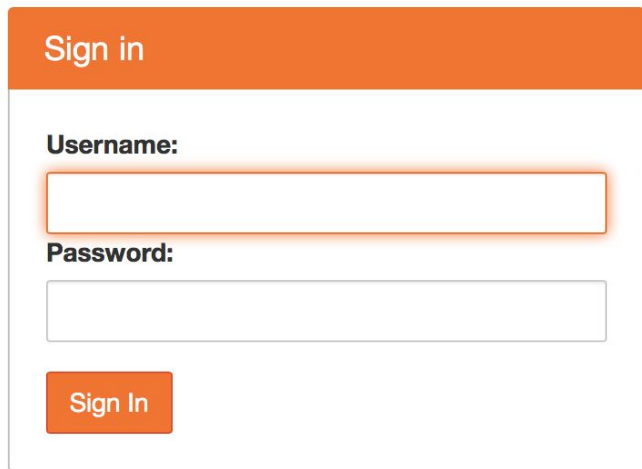


Getting started with JupyterHub

September 3, 2019

Sign in JupyterHub

URL: <https://ba-lab.fairfield.edu/hub/login>



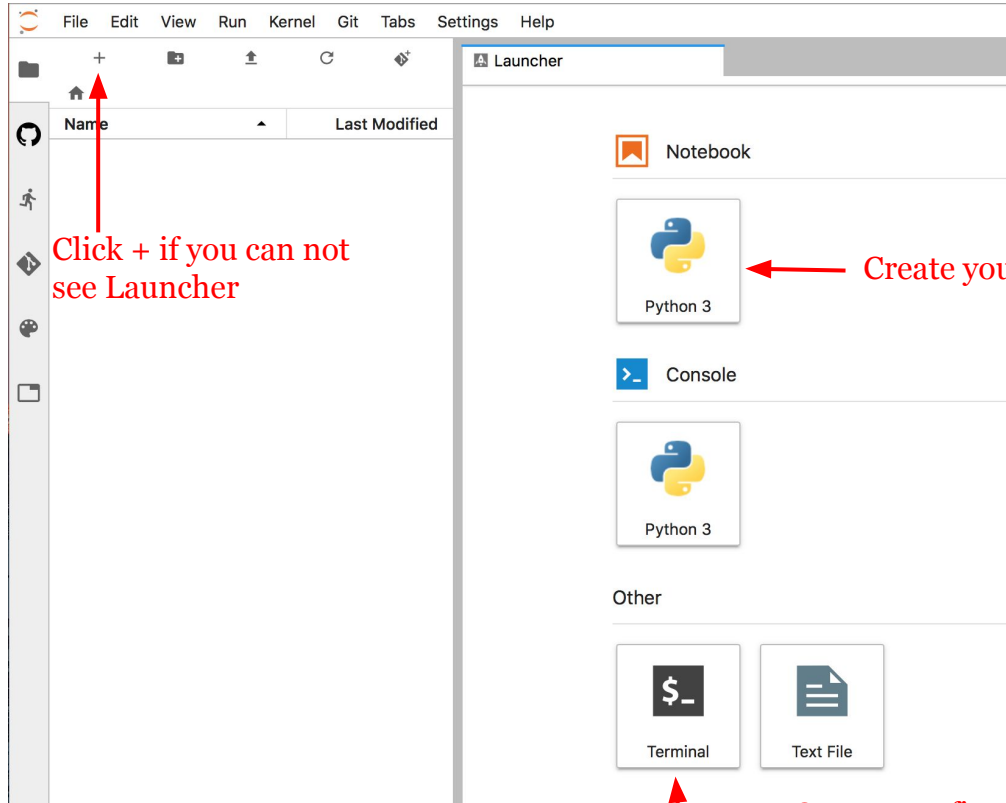
The image shows a web form for signing in to JupyterHub. It has an orange header bar with the text "Sign in". Below the header, there are two input fields: "Username:" and "Password:". The "Username:" field is highlighted with a red border. At the bottom left of the form is an orange button labeled "Sign In".

Username: The first letter of your first name and your last name.

For example: My name is Yue Pu. My username is ypu.

Password: **Create** your password when you **first** log in.

After you sign in, you will see a **JupyterLab** interface.



Create your first Notebook

Open your first Terminal

Create your first Notebook in JupyterLab

1. Select **Markdown** from the cell type selector
2. Enter `# Your first Python Program` into the first cell
3. Press the **+** button to insert a new cell
4. Select **Code** from the cell type selector
5. Enter `print('Hello world!')` into the second line
6. Click ▶ to run each cell
7. Do not forget to save if you want to keep the Notebook

The screenshot displays the JupyterLab interface. At the top, a tab labeled 'Untitled.ipynb' is open. Below the tab is a toolbar with icons for saving, inserting a new cell, deleting a cell, copying, pasting, and running. A red arrow points to the '+' icon with the text 'Insert a cell'. To the right of the toolbar, a dropdown menu shows 'Markdown' selected, with a red arrow pointing to it and the text 'Select Markdown or Code here'. Below the toolbar, there are two cells. The first cell is a Markdown cell containing the text '# Your first Python Program'. The second cell is a Code cell containing the code `print('Hello world!')`. Below the cells is another toolbar, identical to the one above. A red arrow points to the run button (▶) with the text 'Run the selected cells'. Below this toolbar, the text 'Your first Python Program' is displayed. At the bottom, the output of the code cell is shown: `[1]: print('Hello world!')` followed by 'Hello world!'.

Untitled.ipynb

Insert a cell

Select Markdown or Code here

Your first Python Program

[]: `print('Hello world!')`

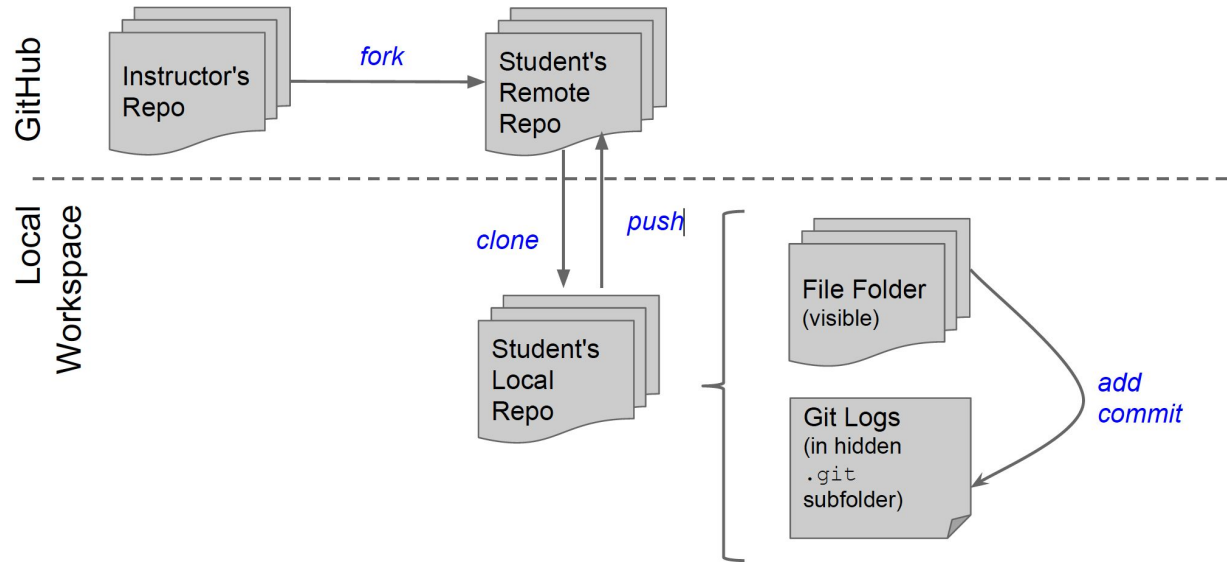
Run the selected cells

Your first Python Program

[1]: `print('Hello world!')`

Hello world!

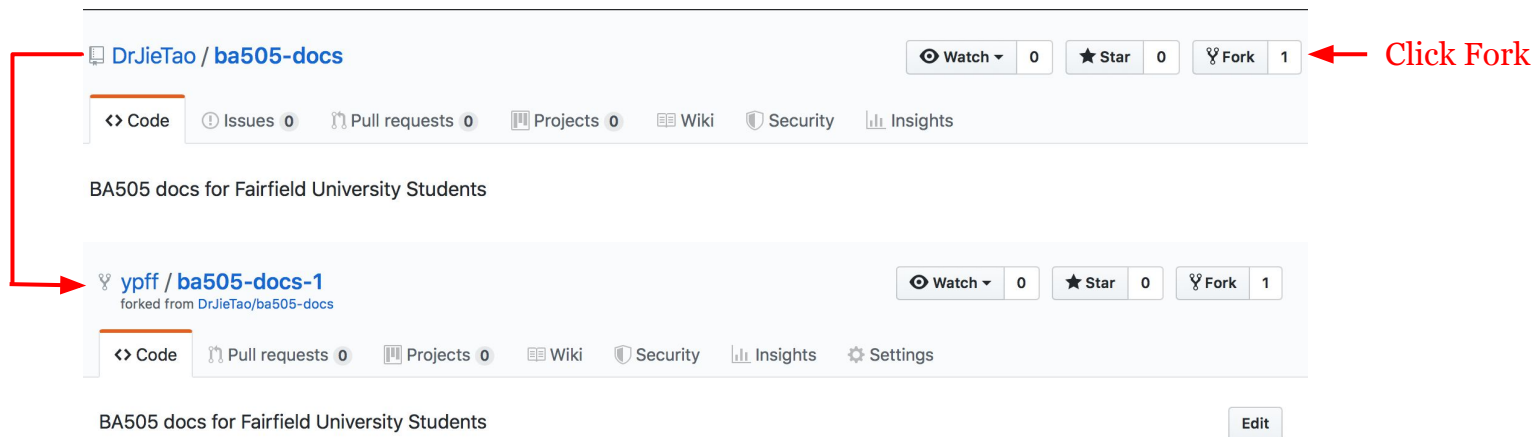
How can we connect with JupyterHub and GitHub?



JupyterHub is your local workspace.

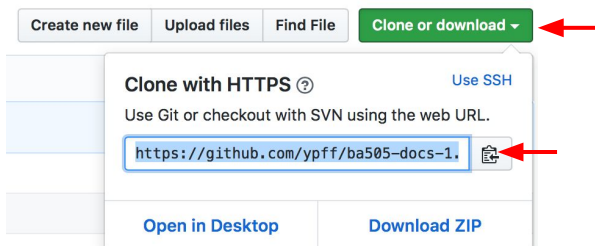
Fork repository in GitHub

1. Sign up for GitHub
2. Open ba505-docs repository: <https://github.com/DrJieTao/ba505-docs>
3. Fork to your GitHub account
 - A fork is a personal copy of a repository with you as the owner (so you can modify things). You do not have permission to edit the original repository.
 - Click Fork and create a forked copy of the repository to your GitHub account.



Clone repository from your GitHub to JupyterLab

1. The fork needs to be cloned to JupyterLab in order for you to work on it
2. On GitHub, copy a clone URL for your forked repository



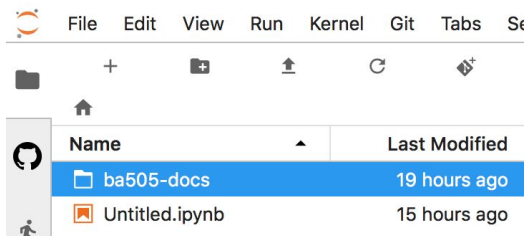
3. In JupyterLab, open a new Terminal, then type and paste

`git clone <your clone URL>`

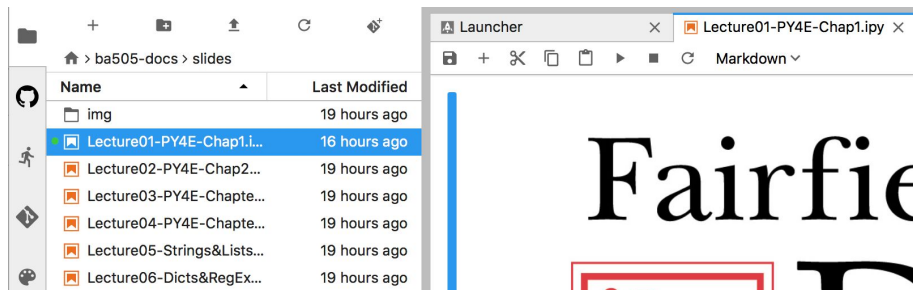
```
jupyter-ypu@ip-172-31-19 x
jupyter-ypu@ip-172-31-19-221:~$ git clone https://github.com/ypff/ba505-docs-1.git
```

Open repository in JupyterLab

1. You will see the **ba505-docs** folder in JupyterLab after git clone



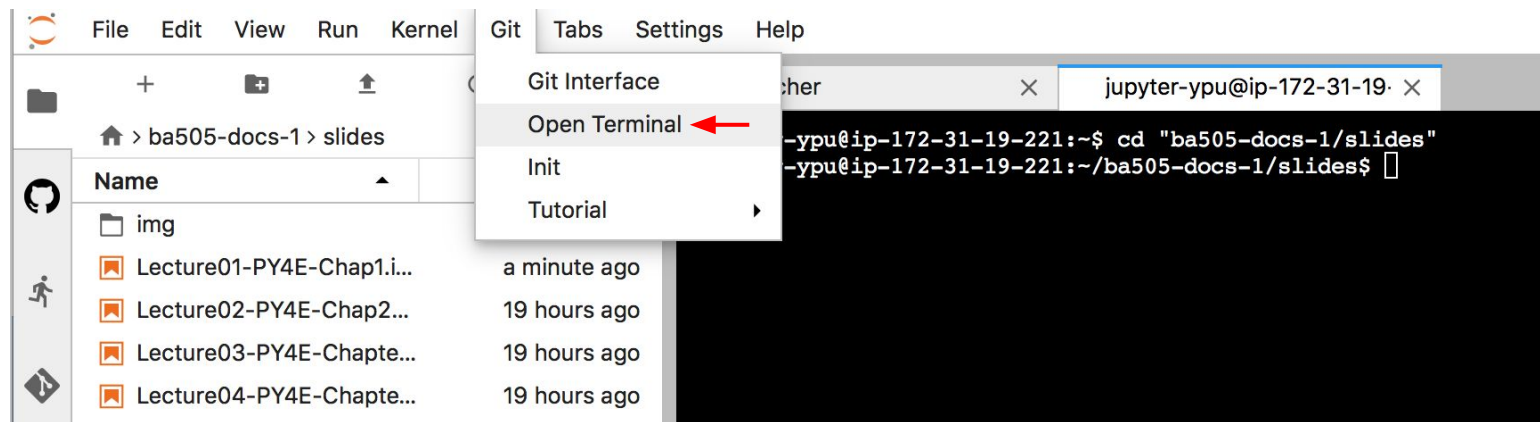
2. Open **Lecture01-PY4E-Chap1.ipynb** in **slides** folder, you can make some notes in the file



3. When you finish your work, please save them. Also, you need to push all your work to GitHub.

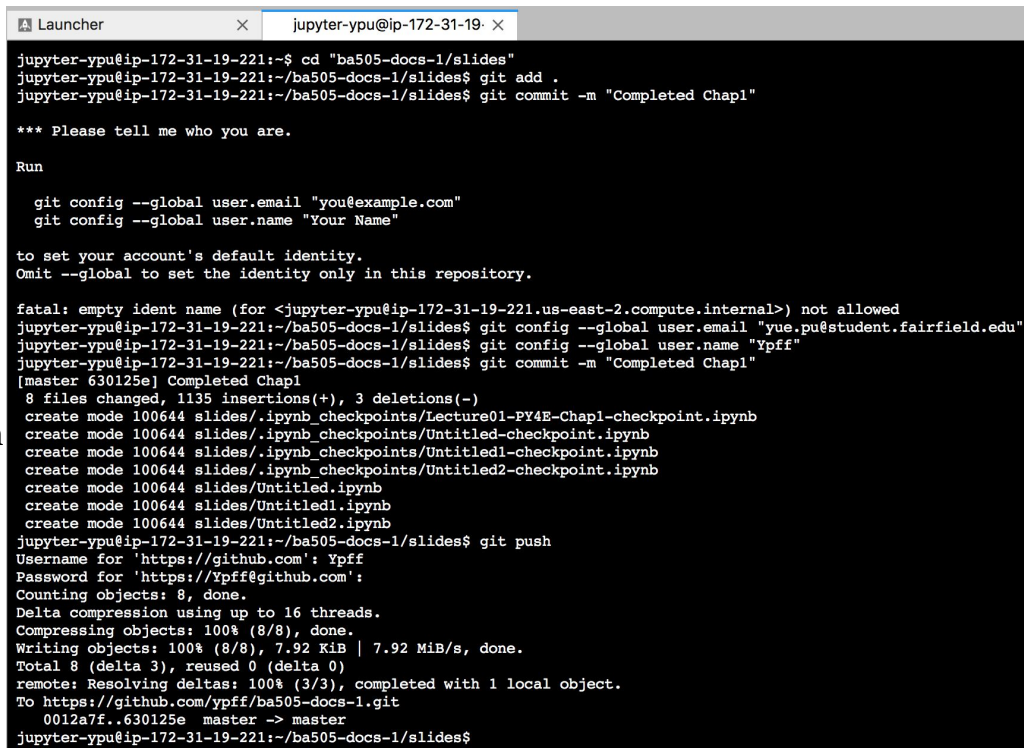
Get a new Terminal within your repository directory

1. Make sure you are in your repository folder in JupyterLab
2. From the Git menu select “Open Terminal” to get a new Terminal within your repository directory



Add, commit and push your repository changes to GitHub

1. Save your changes before you commit
2. Add all current changes
Type `git add .`
3. Type `git commit -m "Completed Chap1"`
The `-m` followed by a commit message
4. Type who you are when you first commit
`git config --global user.email "your GitHub account email"`
`git config --global user.name "your GitHub username"`
5. After you tell who you are you need commit again
`git commit -m "Completed Chap1"`
6. Push your changes to GitHub repository
Type `git push`
Type your GitHub username
Type your GitHub password



```
Launcher x jupyter-ypu@ip-172-31-19- x
jupyter-ypu@ip-172-31-19-221:~$ cd "ba505-docs-1/slides"
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git add .
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git commit -m "Completed Chap1"

*** Please tell me who you are.

Run

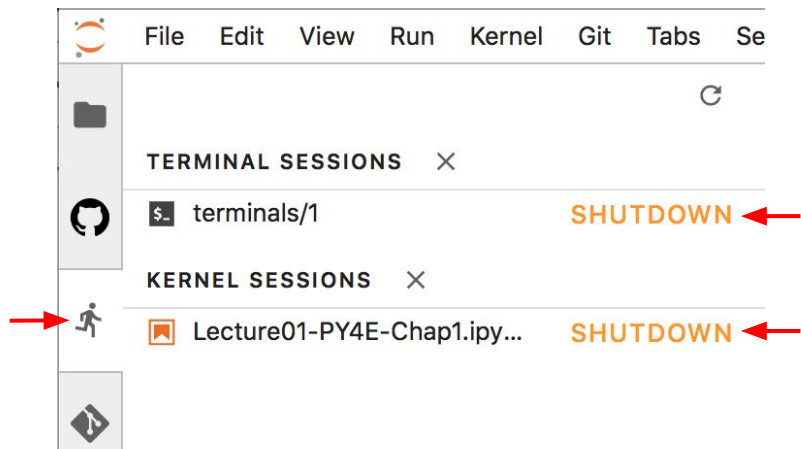
git config --global user.email "you@example.com"
git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

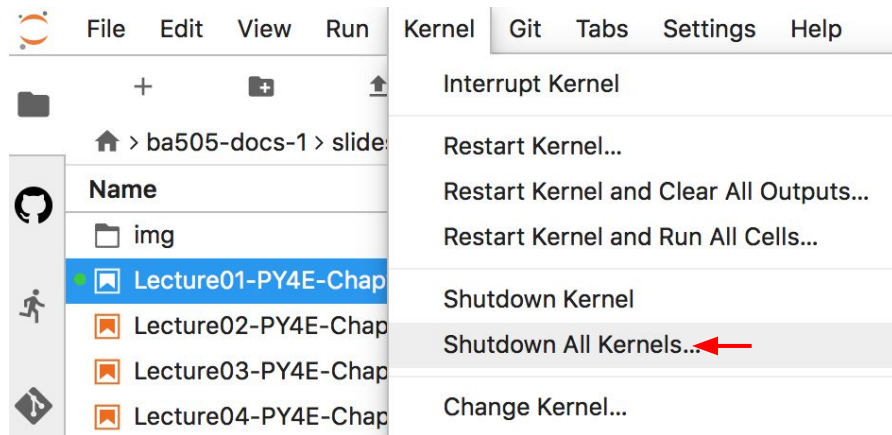
fatal: empty ident name (for <jupyter-ypu@ip-172-31-19-221.us-east-2.compute.internal>) not allowed
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git config --global user.email "yue.pu@student.fairfield.edu"
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git config --global user.name "Ypff"
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git commit -m "Completed Chap1"
[master 630125e] Completed Chap1
 8 files changed, 1135 insertions(+), 3 deletions(-)
 create mode 100644 slides/.ipynb_checkpoints/Lecture01-PY4E-Chap1-checkpoint.ipynb
 create mode 100644 slides/.ipynb_checkpoints/Untitled-checkpoint.ipynb
 create mode 100644 slides/.ipynb_checkpoints/Untitled1-checkpoint.ipynb
 create mode 100644 slides/.ipynb_checkpoints/Untitled2-checkpoint.ipynb
 create mode 100644 slides/Untitled.ipynb
 create mode 100644 slides/Untitled1.ipynb
 create mode 100644 slides/Untitled2.ipynb
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$ git push
Username for 'https://github.com': Ypff
Password for 'https://Ypff@github.com':
Counting objects: 8, done.
Delta compression using up to 16 threads.
Compressing objects: 100% (8/8), done.
Writing objects: 100% (8/8), 7.92 KiB | 7.92 MiB/s, done.
Total 8 (delta 3), reused 0 (delta 0)
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
To https://github.com/ypff/ba505-docs-1.git
 0012a7f..630125e master -> master
jupyter-ypu@ip-172-31-19-221:~/ba505-docs-1/slides$
```


Shutdown running processes in JupyterLab

You need to **Shutdown** all running processes every time when you finish your work. It will help you save your memory for your next class.



OR

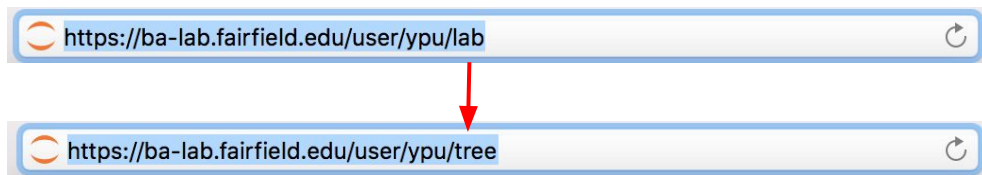


Logout JupyterHub

1. Logout is only available in classic notebook interface.

How to change from JupyterLab interface to classic notebook interface?

Please change your URL in your browser from `lab` to `tree`.



2. Logout



Thank you!

If you have any questions, please email to yue.pu@fairfield.edu