INSTALLATION INSTRUCTIONS FOR IPYTHON ENVIRONMENT

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OVERVIEW

- Why am I doing this?
  - Installing python and its libraries for the first time can be troublesome (severe understatement)
  - The kind people in Columbia's Center for New Media Teaching and Learning (CCNMTL) have built a "python in a box" solution to make it easier
- General Idea:
  - Using two applications (Virtual Box and Vagrant) create a little virtual computer inside of your actual computer that runs LINUX UBUNTU (a different operating system)
  - Have python and all the key libraries already installed on that little virtual computer
  - Run ipython-notebook off of that little virtual computer, but have ipython-notebook connect to the local browser on your computer for the graphical interface
  - Have some nicely synced up folders that make file transfer easy

STEPS TO DO THE FIRST TIME YOU ARE SETTING UP

STEP 1: INSTALL VIRTUAL BOX

- http://www.virtualbox.org/

STEP 2: INSTALL VAGRANT

- http://www.vagrantup.com/

EXTRA STEP: ONLY FOR WINDOWS USERS

- **On Windows**, you should also install ssh software. Cywin, PuTTy, or Git are all viable options.

CYWIN: https://www.cygwin.com/

PUTTY: http://www.putty.org/

Git: http://git-scm.com/download/win

- Git is probably the simplest. Upon install, the Git installer will prompt you to choose how to "Adjust your Path environment." Select the bottom option: "Run Git and included Unix tools from the Windows Command Prompt".

STEP 3: GET ZIP FILE ON COURSEWORKS

- Go to Courseworks >> Files and Resources >> Software
- Download "DH-METHODS.zip"
- Unzip it, resulting in the "DH-METHODS" folder. Put that folder somewhere convenient where you will keep in from now on.

EXTRA STEP: ONLY IF YOU'VE NEVER USED TERMINAL ON MAC BEFORE

- You are used to using the graphical user interface (GUI) on your mac. But you can also interact with your computer using "command line" (pure text interface).
- On Mac, You do this via an application called TERMINAL
- For most users, this will be in: Applications >> Utilities
- Just double click it like you would any other app
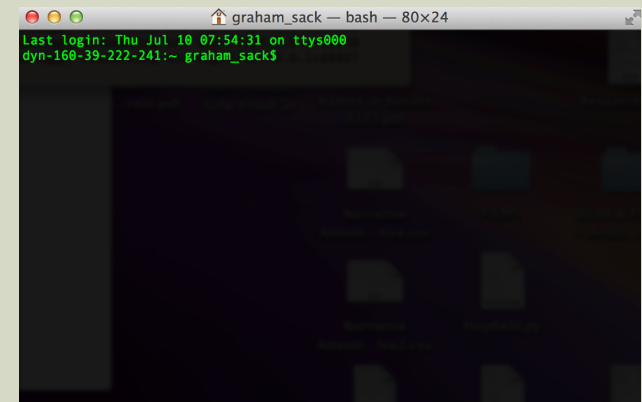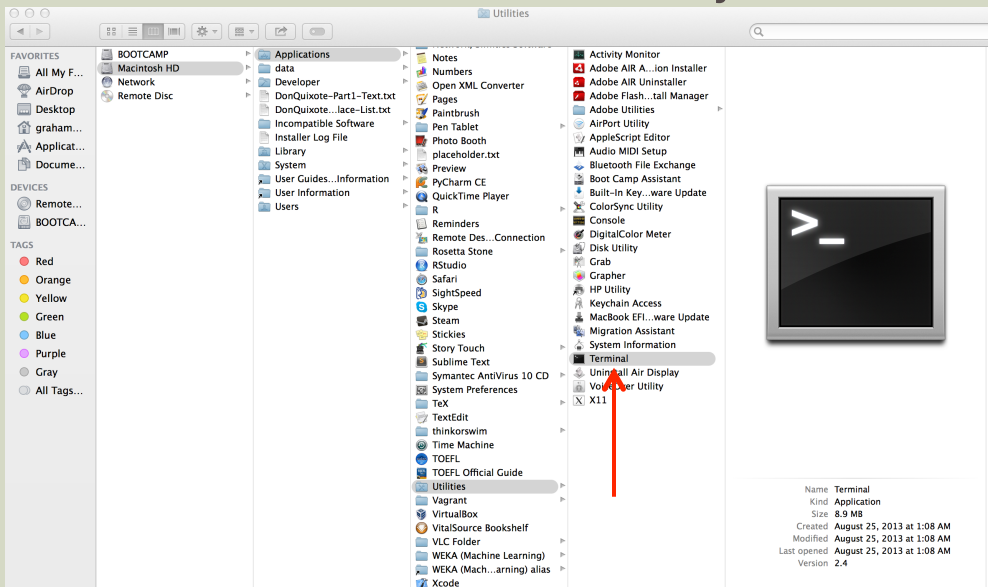
EXTRA STEP: ONLY IF YOU DON'T KNOW HOW TO FIND A "FILEPATH"

- **Filepath just means the sequence of folders and subfolders you need to navigate through to get to a file on your computer**
- **On Mac, you can easily figure out the filepath for a file or folder by dragging that folder into the terminal window**

Click and drag folder into open Terminal window

Filepath should just appear

STEP 4: NAVIGATE TO WHERE THE VAGRANTFILE IS

- Open up Terminal
- Get the full filepath leading to the Vagrant folder inside of the DH-Methods folder. The filepath should look sort of like this. (The beginning of the filepath will depend on where you put the folder):

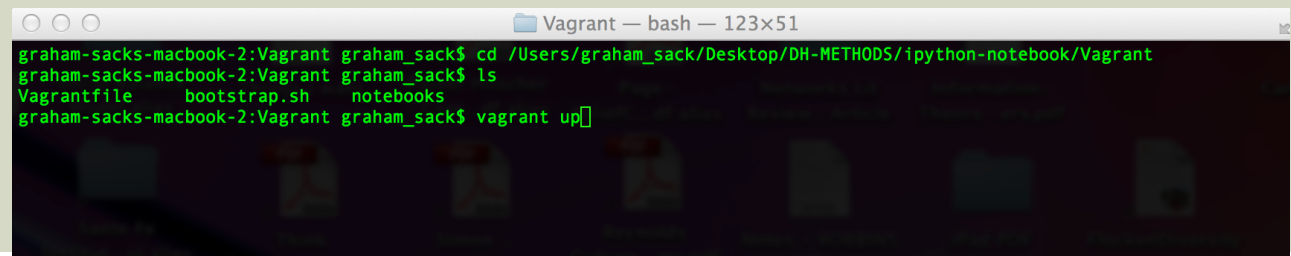/Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant

[Neat trick for Mac users: rather than typing in the full path, you can just drag the Vagrant folder into the terminal window and it will write the full filepath for you]

- Change directory to the Vagrant folder

>> cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant

- Check it has the "Vagrantfile" in it by listing the contents of the Vagrant folder

>> ls


```
graham-sacks-macbook-2:Vagrant graham_sack$ cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant
graham-sacks-macbook-2:Vagrant graham_sack$ ls
Vagrantfile       bootstrap.sh      notebooks
graham-sacks-macbook-2:Vagrant graham_sack$ vagrant up
```

STEP 5: DOWNLOAD THE VAGRANT BOX

Type this in to command line:
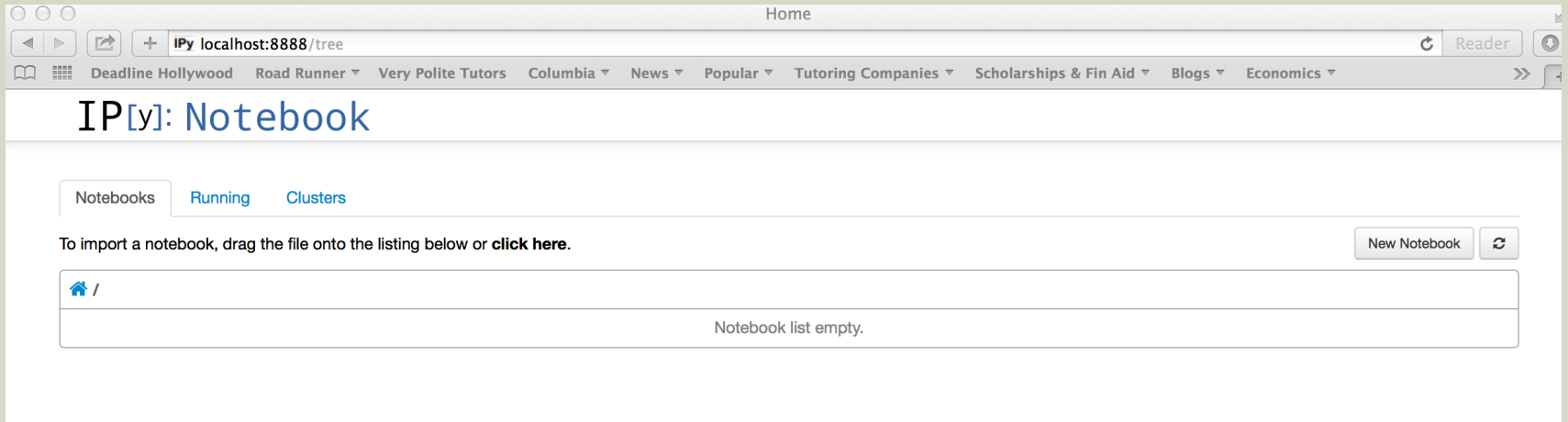
>> vagrant up

It will now download a big (1 GB) file to your computer. This may take a while.

```
graham-sacks-macbook-2:vagrant graham_sack$ vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Importing base box 'ipython-notebook'...
==> default: Matching MAC address for NAT networking...
```

Once this has downloaded, the hard part is over.

STEP 6: OPEN IPYTHON-NOTEBOOK

Go to your favorite web browser (e.g., safari or google chrome)
In the address bar type: "localhost:8888/"

You are in ipython notebook! Yay!

THINGS TO DO ON AN ONGOING BASIS AFTER INITIAL INSTALLATION

LAUNCHING I-PYTHON

1. Open Terminal
2. Go to the directory containing the Vagrantfile

For example:

>> cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/vagrant/

3. Type the following in Terminal:

>> vagrant up

It will take about 30 seconds to load.

4. Open your browser and put "localhost:8888" in the address line

ADD MORE TUTORIALS

Download

Put here

SHUTTING DOWN

- When you are done using notebook
1. Close the browser window
2. In Terminal, type
>> vagrant halt

```
graham-sacks-macbook-2:Vagrant graham_sack$ vagrant halt
==> default: Attempting graceful shutdown of VM...
graham-sacks-macbook-2:Vagrant graham_sack$ []
```

3. Close Terminal