Student setup sequence to run EOSC211 Jupyter notebooks.

Follow the steps in column 1 exactly as written. This sequence assumes you are running a laptop or computer that uses uses the Windows 10/11 operating system. NOTE: Commands must be typed EXACTLY as written: copy and pasting doesn't work.

Table 1: One-time setup instructions

	Do this …	**… to accomplish this.**
1	- Download miniconda from https://docs.conda.io/en/latest/miniconda.html; choose the `Miniconda3 Windows 64-bit` version. - Run the downloaded executable file, agreeing to the licenses and accepting all defaults. - You should install for "just me".	Install "miniconda", software that both manages packages you will fetch later, and includes basic components of Python.
2	- Tap the Windows key, type "Anaconda Powershell", press Enter. You should get the command line window showing something like: `(miniconda3) Users/your-name>`	Run "Anaconda Powershell prompt (miniconda3)"

3	Using windows explorer, go to the eosc211 folder in which you are keeping all your eosc211 work. There is a window near the top of explorer that is showing your file location (it should look something like `catherine > repos > eosc211` where in my case I've nested the eosc211 folder in another folder called repos). If you click in this window, you should see the full "path" to that folder – it should look something like `c:\catherine\repos\eosc211`
	
	Copy and paste this path into whatever you use for keeping notes as you will use it anytime you want to use jupyter notebook in future. In Table 2: step 2 we refer to this as "eosc211_path"
	
	Now go back to the power shell terminal and "change directory" so that you are inside this folder. To do this, use the `cd` command to change to the path you just saved:
	
	`cd c:\catherine\repos\eosc211`
	
	You can also use the Spanish tilde (~) as a shortcut for your home folder:
	
	`cd ~\repos\eosc211`
	
	You can use the `pwd` command to print your working directory:
	
	`pwd`
	
	This should print your eosc 211 folder as your current working folder.
		Use a few basic command line instructions, see where you are (which folder), what's there.

	Do this …	… to accomplish this.
4	Log into canvas and go to “Files” then to “lockfiles”. Download the file named `conda-win-64.lock` Type `start .` (the word start followed by a period) to start Explorer in this folder. Use explorer to to move `conda-win-64.lock` file from your Downloads folder to your eosc211 folder. You should see the filename listed when you type `ls` at the command prompt	Download the specifications for your conda environment. For more info: see the explanation of “why environments” in Resources below
5	In the eosc211 folder --Type `conda activate base` - Type `conda create –name eosc211 –file conda-win-64.lock` -- conda will begin downloading and installing packages. - type `conda env list` You should see a list of two environments: "base" and "eosc211"	Starting from the default base environment, build a new environment required for running Python and Jupyter notebooks for this course.
7	- Type `conda activate eosc211`	Switch to the eosc211 environment.

Table 2: To use jupyter notebook any time

1.	Hit the windows key and select “Anaconda powershell prompt” to open a powershell terminal	
2.	Change into your eosc folder by either a) Finding your eosc211 folder and dragging it into your terminal window b) In the terminal window type: `cd “eosc211_path”` where “eosc211_path” the path you copy and pasted somewhere safe in step 3 above. E.g. for me I would type: `cd ~/repos/eosc211_2022` cd means “change directory” or “change folder”.	
3.	- Type `conda activate eosc211`	Makes the packages specified by the “eosc211” environment available to Jupyter.
4.	- Type: > `jupyter notebook`. - You should see your browser open a new window with the Jupyter Notebook interface. If not, get help from the instructor / TA.	Test Jupyter Notebooks.
5.	You’re ready to begin working as you would on the jupyter hub. You should see your lab and class folders listed, be able to make new ones etc.	

Resources

Using the command line and “shells” :

- https://eoas-ubc.github.io/tut-commandline.html.

Explanation of “why environments”:

- https://www.freecodecamp.org/news/why-you-need-python-environments-and-how-to-manage-them-with-conda-85f155f4353c/ .

Jupyter Notebook documentation:

- https://jupyter-notebook.readthedocs.io/en/stable/ui_components.html
- https://nbviewer.jupyter.org/github/jupyter/notebook/blob/master/docs/source/examples/Notebook/Notebook%20Basics.ipynb
- https://nbviewer.jupyter.org/github/jupyter/notebook/blob/master/docs/source/examples/Notebook/Running%20Code.ipynb