Windows setup sequence to run a301 Jupyter notebooks.
Updated 2024/Jan/08
Follow the steps in column 1 exactly as written. This sequence assumes you are running a laptop or computer that 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	Make a new folder by typing the following at a new terminal prompt
	
	`mkdir -p ~/repos/a301`
	
	where "~" means "my home folder" and corresponds to the path you see when you type
	
	`echo $HOME`
	
	at the prompt
	
	Change to this directory by typing
	
	`cd ~/repos/a301`
	
	Then type `pwd`
	
	This should show your a301 folder as your current working folder.
	
	This is called a "path", copy and paste it into whatever you use for keeping notes as you will use it anytime you want to use jupyter notebook in future.
		Use a few basic command line instructions, see where you are (which folder), what's there.

	Do this …	… to accomplish this.
4	Download the file named "environment.yml" from the following Dropbox link: environment.yml At a prompt type `start .` (the word start followed by a period) to start Explorer in this folder. Use Explorer to move your `environment.yml` file from your Downloads folder to your a301 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 folder `~/repos/a301`
	
	Set conda-forge as your preferred source of python packages. Note that "--add" is two short dashes followed by add
	
	`conda config --add channels conda-forge`
	
	followed by (again, type two short dashes followed by set)
	
	`conda config --set channel_priority strict`
	
	create the a301 environment by typing (again, dashes are doubled)
	
	`conda env create --name a301 --file environment.yml`
	
	- mamba will begin downloading and installing packages.
	
	- Type `conda env list` You should see a list of two environments: "base" and "a301"
		Starting from the default base environment, build a new environment required for running Python and Jupyter notebooks for this course.

7	- Activate the a301 environment by typing: `conda activate a301`	Switch to the a301 environment.

Table 2: To use jupyter notebook any time

1.	Tap the Windows key, type "Anaconda Powershell", press Enter. You should get the command line window showing something like: `(miniconda3) Users/your-name>`	
2.	Change into your a301 folder by typing `cd ~/repos/a301`	
3.	- Type `conda activate a301`	Makes the packages specified by the "a301" environment available to Jupyter.
4.	- Type: `jupyter lab`. - 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.

Resources

Using the command line and "shells" :

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

Explanation of "why environments":

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

Jupyter documentation:

- Jupyter lab -- https://jupyterlab.readthedocs.io/en/stable/