

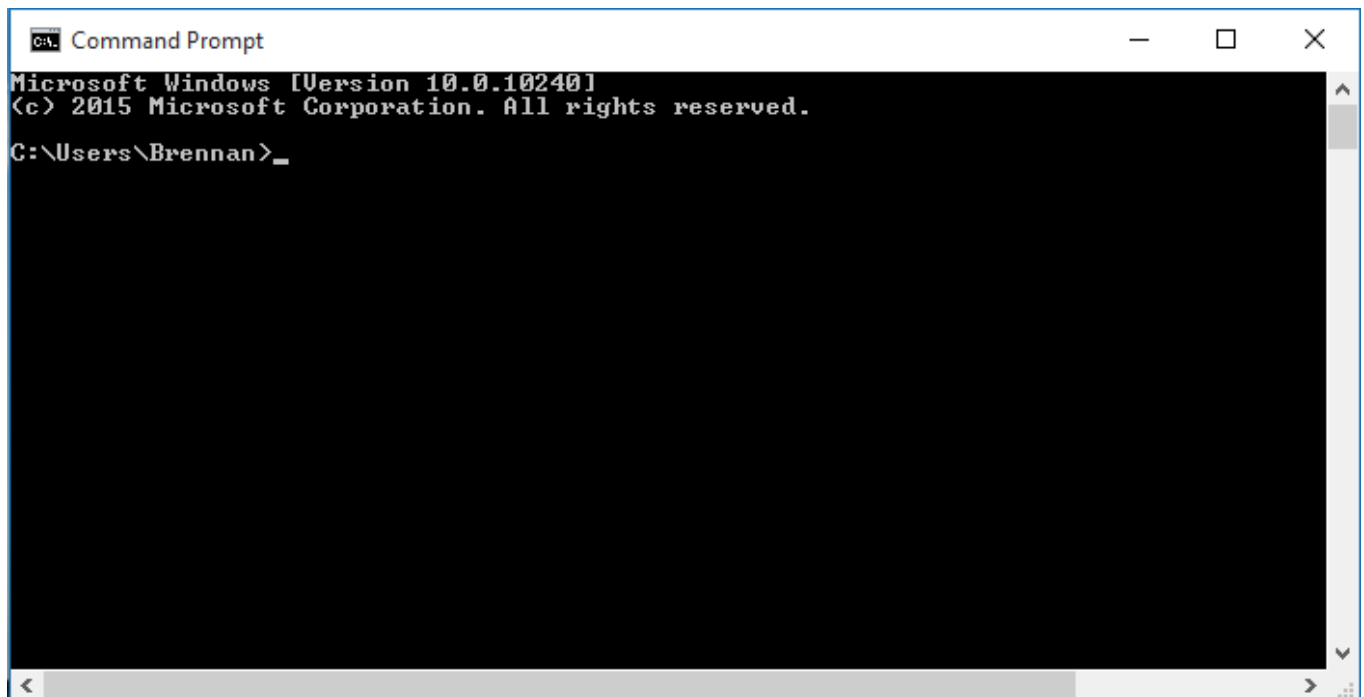
# Opening the FluxEngine tutorials

The FluxEngine tutorials are written using Jupyter which allow text descriptions, images and code to be embedded together into an interactive Python environment. To open the tutorials you must first start Jupyter. If you have installed FluxEngine you should also have Jupyter installed. If you have not installed FluxEngine download it from [here](https://github.com/oceanflux-ghg/FluxEngine/archive/fe_v4.zip) ([https://github.com/oceanflux-ghg/FluxEngine/archive/fe\\_v4.zip](https://github.com/oceanflux-ghg/FluxEngine/archive/fe_v4.zip)) and read the installation instructions in [the manual](https://github.com/oceanflux-ghg/FluxEngine/blob/fe_v4/FluxEngineV4_instructions.pdf) ([https://github.com/oceanflux-ghg/FluxEngine/blob/fe\\_v4/FluxEngineV4\\_instructions.pdf](https://github.com/oceanflux-ghg/FluxEngine/blob/fe_v4/FluxEngineV4_instructions.pdf)).

## Starting Jupyter

Assuming you have FluxEngine installed, you can open the tutorials by running the `fe_tutorials.py` command. On Windows you will do this in command prompt, on MacOS or Linux you will use Terminal.

On Windows click the 'Start' menu, and use Cortana to search for and open `Command Prompt`. You should have a window which looks similar to this:



On Linux and MacOS, open a terminal window instead. Command prompt and terminal will start in your home directory. You can change directory in command prompt or terminal by using the `cd` (change directory) command followed by a path to the directory you want to switch to. Path names can be absolute or relative. In most cases it will be sufficient to leave your working directory as the default home directory.

Once you have your command prompt/terminal window open (and optionally you have navigated to the desired directory), just type `fe_tutorials.py` and press enter.

```
fe_tutorials.py
```

This makes a copy of the FluxEngine tutorial files which are put in a `FluxEngineTutorials` subdirectory of your working directory. Next it launches Jupyter Hub to start the interactive tutorials. In most cases this should open a web browser window on a page that looks like this:

Select items to perform actions on them.

Upload

New ▾

↻

<input type="checkbox"/> 0 ▾	📁 /	Name ▾	Last Modified	File size
<input type="checkbox"/>	📁 01_introduction		an hour ago	
<input type="checkbox"/>	📁 02_using_insitu_data		a day ago	
<input type="checkbox"/>	📁 03_fixed_station_data		a day ago	
<input type="checkbox"/>	📁 04_N2O_fluxes		19 hours ago	
<input type="checkbox"/>	📄 getting_started.ipynb		Running seconds ago	11.4 kB

On Windows systems you may be asked which program you want to open the file in, if so, choose your usual web browser. On some systems you may not get any popup and instead there will be a URL for you to copy and paste into a web browser in command prompt after you start Jupyter.

## Opening the first tutorial

This will start your web browser and open jupyter hub. You will see four folders (one for each tutorial) and the notebook version of this getting started guide.

Click on `01_introduction` to enter this folder. Then click on `01_introduction.ipynb` to start the tutorial (this will open in a new tab). You can return to the `Tutorials` directory to view the other tutorials by clicking the folder icon next to the two dots `..` at the top of the list. For now though, have read through