Python

Python tasks

1. Read my Python primer on the ASTR8020 links page
2. Make sure your repo is up to date. *git fetch*, *git status*, and *git pull* if it is not.
3. Create a text file that contains two columns, each containing the numbers 1 to 10
   - *vi(m)*, *emacs*, and *sublime* are all text editors
3. use *numpy.genfromtxt* and *matplotlib* (see the links page) to plot those two columns (e.g. as an *x* vs *y* plot)
4. Use the *matplotlib plot* command to plot the data as both a straight line and as yellow crosses
5. Now, write a single function that can be called from the command line to both read the data and make the plot

Python tasks

1. Create a function that, when passed an x value, calculates $y = x^2 + 3x + 8$
   - you don't have to document all in-class work, but I expect careful commenting of any *submitted* work
2. Write a function that calls your function from step 1 to produce a plot of $y = x^2 + 3x + 8$ against x
   - limit the x-axis to the range -5 to 5 (see the *plot.axis* command in the *matplotlib* tutorial)
   - try *import numpy as np*, *x = np.arange(10)-4.5* and *print(x)* to see how to make an array of x values
   - practice manipulating that array (e.g., try *print(2*x)*)

Python tasks

1. Commit your function and procedure with Git
   - don't forget to *git fetch* and *git pull* before you *git commit* and *git push*
2. Look at functions that other students have committed
   - did other people use features you didn't?
   - did they consider color or line thickness?
   - did they use comments to make the code more informative?