

Python

Python tasks

1. Read my Python primer on the [ASTR5160 links page](#)
 2. Create a text file that contains two columns, each containing the numbers 1 to 10
 - *emacs* is one editor that can be used to make files
 3. use *numpy.loadtxt* 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
 - use `if __name__ == "__main__":` (see the [links page](#))
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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)*)
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Python tasks

1. Commit your function and procedure to SVN

- don't forget to *svn up* before you *svn ci*

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?
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