

Non-programming component

Part of your assignment for this week is to find a (research) job you might be interested in and find out what sort of programming it entails. You can look at non-research jobs if you'd like, but they need to be programming or data analysis jobs. For research jobs, I recommend talking to professors in your other astro classes if you haven't done so already. For non-astro programming jobs, check out <http://careers.stackoverflow.com/> or other online programmer job postings - there are tons.

Answer the following questions:

1. What programming language is used in the job, or what language would I need to know to do the job?
2. How would most of my time be spent at this job? (e.g., data analysis, plotting, writing new code...?)

Write this up in a text file `jobs.txt` and include a link if it's an online posting or the name of the professor if the job is with someone local. Put it on your github repository in your `assignment5/` directory along with the rest of the assignment. This part is due next Wednesday.

This part of assignment is partly meant to get you looking for jobs, since most of you reported that it's why you're taking ASTR2600. It will also help motivate you and give you some idea of what aspects of this class to focus on.

Exercise: *Due by classtime February 25th, 4:00 PM*

As usual, do all of this in your `assignment5/` directory.

Exercise 10.0: Creating a script file to set the values of physical constants & units

Open a journal file, `YourName_ex4_10.0.pro`, to do the interactive part.

Exercise 10.1: Creating an interactive script file

Open a journal file, `YourName_ex4_10.1.pro`, to do the interactive part.

Exercise 10.2: Contour plotting using a script

Last line on page 22 says you should name the JPEG file `ex10_2_plot.jpg`. You should, of course, stick `YourName_` on the front of that.)

Open a journal file, `YourName_ex4_10.2.pro`, to do the interactive part.

Exercise 11.0: Interactive *program* (like interactive *script* in 10.1).

A good starting point would be to make a copy of your `plot_Planck_ch10.pro` file from 10.1.

Exercise 12.0: Using IF..THEN..ELSE blocks (in a FOR loop)

Exercise 12.1: Interactive programming example.

Exercise 12.2: WHILE loop exercise

Exercise 12.3: Simple 1D dynamics with FOR loop

Turn in all `.pro` files you write for the exercise on github

`YourName_plot_Planck_ch11.pro`

`YourName_pieewise.pro`

`YourName_plot_Plancks_ch12.pro`

`YourName_factorial.pro`

`YourName_spring1D.pro` (last version)

Whuduzitdo? Do all the Whuduzitdo's for Chapters 11 & 12. Filename: `YourName_wdid5.txt`

Graded Homework Due by February 27th, 11:59:59 PM

Homework 12.0: Interactive Planck program. Filename: `YourName_plot_Planck_hw12.0.pro`

Homework 12.1: Interactive function plotter. Filename: `YourName_plot_functions_hw12.1.pro`

Three springs: These homeworks each deal with the same objective, modeling 3 springs. The first is an expansion of Exercise 12.3. Each of the subsequent parts modifies the one before. The resulting behavior should always be the same, so you can check your program at each stage by making sure it is.

Homework 12.2: Three springs: filename `YourName_springs_hw12.2.pro`

Homework 12.3: Use arrays of spring constants. There is no separate 12.3. Just 12.3a, 12.3b, etc. Each version should be in its own file, e.g., `YourName_springs_hw12.3a.pro`, etc.

Homework 12.3a: Array of initial conditions, scalars for current conditions

Homework 12.3b: Array of initial conditions, arrays for current conditions

Homework 12.3c: Swap loops to put spring loop inside time loop

Homework 12.3d: Replace a spring loop with array arithmetic

Turn in all .pro files you write for the homework on github

`YourName_plot_Planck_hw12.0.pro`

`YourName_plot_functions_hw12.1.pro`

`YourName_springs_hw12.2.pro`

`YourName_springs_hw12.3a.pro`

`YourName_springs_hw12.3b.pro`

`YourName_springs_hw12.3c.pro`

`YourName_springs_hw12.3d.pro`