Remember to search the web for ideas. It’s a good idea to Google for code snippets and ideas of how others have tackled the problem you’re working on. I almost never code something entirely from scratch. I borrow from others’ good ideas. If your code is throwing an error, Google the error message and see how others have troubleshot it. I also rely heavily on [https://stackoverflow.com/ (Links to an external site.)](https://stackoverflow.com/) when I have a Python exception message or I’m wondering how something works.

Also: work through your ideas before you try to write code. Here's a good process.

1. Think through the problem and make sure you understand it fully
2. Write down, in plain English sentences, how you could solve this problem
3. Re-write your solution in pseudo-code
4. Re-write your pseudo-code in Python and run it, test it, tweak it, repeat
5. Save your plain English sentences from step 2 as comment lines in your code

Lastly, please follow these instructions every time you submit an assignment or exercise to get full credit:

* Create a new notebook for your homework assignment. Don't include extraneous cells of code or lines of code in it. The notebook you submit should only include lines of code (and explanatory text) needed to complete the assignment.
* Make sure the output in your notebook appears as expected and in satisfaction of the exercise instructions. I shouldn't have to run the notebook to see your output.
* But that said, do make sure the notebook runs without errors. To verify this: restart the kernel, clear all output, then run all cells. I can't grade your submission for partial credit very well if the notebook doesn't run.
* Maintain consistent paths to files that you're opening. Moving forward, all files being opened by the notebook should be in a subfolder called 'data' located inside the parent folder that contains the notebook. If the files aren't in a consistent place, it breaks your notebook when I run it on my computer.
* Use lots of comments. Describe what you're doing and how it works, every 1 or 2 lines of code.