# Assignment #3

## Objective

Learning about reading and writing from and to files, creating functions, logic and if statements.

## Due

Tuesday Feb 2nd at 9am. Remember to turn in your weekly participation log.

## Background

In Assignment #2 you learned about strings, variables, and printing from the Shaw text in exercises 1-9. In class we covered Shaw text exercises 10-13 together on Tuesday the 21st (see lecture slides) where we learned prompting for user input and retrieving user arguments for a program from the command-line. Please refer to the lecture slides if you need to review this material. Now we move on.

You will have a full week to complete this assignment. Get started as soon as possible to ensure you have plenty of time to work through it***. Avoid trying to do the entire thing at one time***. Doing a few exercises and taking a break will help with memory retention. If you have questions, use Slack! Remember to post questions to the **#general** channel to give anyone the chance to respond. Please commit to your GitHub repository all the completed exercises from this assignment in a directory named ‘assigment3’ and send the URL for your GitHub repository to Dr. Ficklin in a private slack message before the assignment due date. Full credit will be earned upon completion of the assignment regardless of correctness.

If you find you are not able to work through everything because it is taking too long please let the instructor know. If we find that most of the students are struggling to finish the work in a reasonable amount of time, then we will adjust the expectations. Not everyone will pick up programming at the same pace. You may find that you devote more or less time than other students.

**Tasks**

1. From Shaw’s *Learning Python 3 the Hard Way*, read and complete exercises #15-30 (pages 80-140). You may skip exercises 24, 25 and 26
   1. Create the programs the author instructs you to.
   2. Make sure that your output is like that shown in the “***What You Should See***” section that appears after each exercise. If you do not have the same results, then check your code, fix any mistakes and re-run until your output looks like those shown.
   3. At the end of each exercise is a “***Study Drills***” section.
      1. Some items in the Study Drills are meant to help you think through what you are doing. For these, take some time to think about the questions, but you do not need to write down answers or turn them in.
      2. If the Study Drill instructs you to write code, then please do so as instructed and turn that in.
   4. For the sake of time you can skip the ‘***Break It***’ sections when they appear.
   5. Finally, avoid the urge to skip over the “***Common Student Questions***” section. The answers to some of those questions may help you out!
   6. Remember:
      1. Be sure to save each exercise into a separate file. Each exercise indicates the name you should use (e.g. ex18.py for the first exercise).
      2. With the Shaw text it is easy to cut-and-paste the code and execute it. But as the author points out this does little to teach. Please take the time to type the code.