Exercise 11: Revision and Reading Code

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Hey, we have almost completed the half of the course. This exercise will have no programming questions to complete, but to revise whatever we have done. I'm going to have you do a form of review of what you have learned so far.

First, go back through every exercise you have done so far and write down every word and symbol (another name for "character") that you have used. Make sure your list of symbols is complete. Next to each word or symbol, write its name and what it does. If you can't find a name for a symbol in the previous exercises, then look for it online. If you do not know what a word or symbol does, then go read about it again and try using it in some code. You may run into a few things you just can't find out or know, so just keep those on the list and be ready to look them up when you find them.

Once you have your list, spend a few days rewriting the list and double- checking that it's correct. This may get boring, but push through and really nail it down. Once you have memorized the list and what they do, then you should step it up by writing out tables of symbols, their names, and what they do from memory. When you hit some you can't recall from memory, go back and memorize them again.

It's important when you are doing a boring, mindless memorization exercise like this to know why. It helps you focus on a goal and know the purpose of all your efforts. In this exercise, you are learning the names of symbols so that you can read source code more easily. It's similar to learning the alphabet and basic words of English, except this Python alphabet has extra symbols you might not know.

Just take it slow and do not hurt your brain. Hopefully by now these symbols are natural for you, so this isn't a big effort. It's best to take 15 minutes at a time with your list and then take a break. Giving your brain a rest will help you learn faster with less frustration.

I highly recommend to write the symbols and characters with their meaning, prepare the list and read it aloud several times before you jump to the next section.

READING CODE:

One of the best ways to learn programming is to look at some other programmer's code and try to understand it. In this exercise we are going to go online, search for some python code and read it, even if it is not understandable, it's okay.

This exercise will be daunting at first. I'm going to throw you in the deep end for a few days and have you just try your best to read and understand some source code from real projects. The goal isn't to get you to understand code, but to teach you the following three skills:

1. Finding Python source code for things you need.
2. Reading through the code and looking for files.
3. Trying to understand code you find.

At your level, you really do not have the skills to evaluate the things you find, but you can benefit from getting exposure and seeing how things look.

When you do this exercise, think of yourself as an anthropologist, trucking through a new land with just barely enough of the local language to get around and survive. Except, of course, that you will actually get out alive because the internet isn't a jungle.

Here's what you do:

1. Go to **bitbucket.org**, **github.com**, or **gitorious.org** with your favorite web browser and search for "python."
2. Avoid any project that mentions "Python 3." That'll only confuse you.
3. Pick a random project and click on it.
4. Click on the Source tab and browse through the list of fi les and directories until you fi nd a **.py** file (but not setup.py—that's useless).
5. Start at the top and read through it, taking notes on what you think it does.
6. If any symbols or strange words seem to interest you, write them down to research later.

That's it. Your job is to use what you know so far and see if you can read the code and get a grasp of what it does. Try skimming the code first, and then read it in detail. Maybe also try to take very difficult parts and read each symbol you know out loud.

Now try some of these other sites:

- **launchpad.net**
- **sourceforge.net**
- **freecode.com**