Notes and enhancements to Miller chapter 12 R Script

We ran into a number of issues working with Miller’s script in Chapter 12. Attached is a revised version of that script, with enhancements and commentary. Here are notable points:

1. With thanks to Sohaib, the chunk related to Wikipedia now uses **https://** instead of **http://.** This fetches an object containing the entire Wikipedia page. For now, the key idea is that it is possible to import the content of a web page. Later we’ll see a bit about how to parse and extract portions of interest.
2. In the **getSymbols** commands, we found the argument **return.class = ‘xts’**. Early in the script we use package xts, which extend’s R basic time-series capabilities. The package authors say that the package allows users to “easily convert one of R’s many time-series (and non-time-series) classes to a true time-based object which inherits all of zoo’s {zoo is another package} methods, while allowing for new time-based tools where appropriate. Additionally, one may use xts to create new objects which can contain arbitrary attributes named during creation as name=value pairs.” Short version: specifying return.class = ’xts’ imports the data in a pre-ordained format for easy plotting with the command **chartSeries**.
3. Also, for **getSymbols** I can confirm that one cannot specify a date range in the command itself. First fetch all of the data, and then subset to choose the dates desired.
4. The code related to using **ggplot2** to create a multiple series plot has been modified in 2 ways to add a second line, simply by an additional **+ geom\_line (aes(y=NHS))** instruction. I’ve also added color to differentiate the 2 lines. To create the pink rectangle for the recession, I modified the calculation of ymin and ymax.
5. Finally, we wondered about finding the ID codes for specific variables (or series) in FRED. Here’s one method:

To find the FRED code for Real GDP per capita (for example). On the FRED website, search for any indicator series of interest. When you find what you want, click on it to produce a graph. You will find the code for the particular series at the top of the graph. For example, Real GDP Per capita has the non-obvious code "A939RX0Q048SBEA". Use it as shown here in the few code lines at the end of the script.