Exercises:
File I/O Part 2

Make a new Eclipse project and copy the enable1 word list from the file-io project to the top-level folder of your new project. Also copy the StreamProcessor and StreamAnalyzer interfaces from the coreservlets.readFiles3 package of the file-io project, and paste them into whatever package you are using in your new project.

1. Print the first 10-letter word found in the file. Split your processing into two methods: one that takes a Stream<String> and the other that takes a filename. Print the result from within your stream-processing method so that both the stream-processing method and the file-processing method can have void return types. Use the StreamProcessor interface to avoid repetitive code in the file-processing method. Test your stream-processing method both with an explicitly-created Stream and the enable1 word list. The result from the file should be "aardwolves".

2. Print the first n-letter word found in the file. Split the processing as with problem 1, but this time do not hardcode the word length (i.e., 10 in the previous problem) into the stream processing method. Instead, pass the word length into both the stream-processing and file-processing methods. The point here is to use an explicit lambda (or "closure") to capture the local variable that stores the word length. This is as opposed to problem 1, where you presumably used a method reference in your file-processing method. Test your stream-processing method both with an explicitly-created Stream and the enable1 word list, and a length of 11. The result from the file should be "abandonment".

3. Repeat the previous problem, except this time have the stream-processing and file-processing methods *return* the word instead of just printing it. Your testing code can print the result. The point here is to use StreamAnalyzer instead of StreamProcessor. Test with data from an explicit stream and from the file, and use various different word lengths.

4. Make methods that will print out the number of words containing a letter or substring. Test with data from an explicit stream and from the file. Are there more English words that contain "x" or that contain "j"? Are there more that contain "ee" or that contain "oo"?