PYTHON #03
CSCI-410 Spring 2013

In this assignment you will modify the scanner written in Python #02 and make it object oriented. The goal here is for you to learn the mechanics of writing simple classes and class methods in Python before you need them for ECS Project #6.

As a bridge to ECS Project #6, in this assignment you will implementing a portion of the Parser module from that project. The focus, however, is not on the parser as much as it is on getting moderately familiar with working with basic classes in Python.

If you are unfamiliar with classes in Python, one short tutorial that might be of use is:

http://www.tutorialspoint.com/python/python_classes_objects.htm

There are also numerous other tutorials and references available that you can search for online.

For this assignment, create a class called Parser. When you initialize (or construct) an instance of the Parser, you will pass it the name of the input file. The constructor will open the file and initialize any variables that need to be. Once created, the Parser will implement the following methods:

hasMoreCommands	This method will return True if the input file still contains lines that have not been processed and False if the end of the input file has been reached.
advance	This command reads the next line from the input and makes it the current line.
output	This command returns a string that consists of the characters to be output to the output file.
stats	This command prints the same statistics as the previous assignment, except it will not know the output file name and so that will be omitted.

The class definition should be placed in a separate file and imported into your main program. Your main program should be named jacklex.py (the change to all lowercase is in recognition of Python's recommended naming conventions).

Note that in this assignment you are reading lines, not characters, from the file. However, you are still to process the contents of those lines one character at a time.

Your files should contain comments at the top giving your name, the course and assignment identification, the due date, the file name, and the version of Python you are using. In addition, you are expected to provide adequate comments throughout the code to document it.

PYTHON #03
CSCI-410 Spring 2013

Submission

In a manner similar to the ECS project, place all files needed for this assignment into a directory named PY03 and zip up the entire directory into a zip file of the form:

CS410_UserID_PY_03.zip

GRADING RUBRIC – 40 pts

    10 pts Effort
    25 pts 5pts for each class method
    5 pts Class code is in separate module file and imported properly
    -5 pts Output not correct
    -5 pts Inadequate header comments
    -10 pts Using Python's regular expression capabilities.
    -10 pts Incorrect submission (filename, etc).