Documentation for P2

Overall, int this project, I changed Carrot.jlex, P2.java, Makefile, and allTokens.in. I also added several .in and .out file for my tests.

Carrot.jlex:

For user code section, I didn't change anything.

For directives section, I defined several new macro for later use.

For regular expression rules section, I defined a lot of regular expressions and corresponding actions for all kinds of tokens: reserved, integer literal, identifier, legal string literal, illegal string literal, and symbols. I wrote comments in Carrot.jlex so that you can know which regex corresponds to which token.

P2.java:

This contains main method of this project to thoroughly test the scanner. To invoke it, first type "make." Then type "make test," it will automatically run P2.main and show the result of the test.

In P2.java, I wrote 9 tests cases: testAllTokens, testLineNumber1, testLineNumber2, testCharNumber1, testCharNumber2, testIllegalInt, testIllegalStr, testComment, and testEOF.

Note: I changed testAllTokens.in because I wanted to add more contents in it.

I wrote comment at each test case in P2.java so that you can know what does each test case do. Each test case has its corresponding .in file and Expect.out file. Expect.out file is the expected output of the test. Make test will compare them with .out files created by this program.

!!!!!!!!!!!!!!!!!!!!!! IMPORTANT !!!!!!!!!!!!!!!!!!!!!!!

In order to properly test errors, I redirected err to a buffer. And then for each time reading a token, I write the buffer to the output file. Therefore, in some test cases, if the input can cause errors, you will see error messages in the output file but not on the screen!!!!

Also, because when error occurs, Jlex does not create a token. So it cannot be printed out until a legal token is read. Therefore, in output files, the order of error messages seems messed up. But, they are correct if you carefully examine them!!!!

Moreover, if you are going to use your test input files to test my P2, it may perform differently from what you expected!! Because I redirected the error message!!!

I also wrote comments about this in my code. See them for more details.

----------------------- END IMPORTANT -----------------------

Makefile:

I added several new command to make test and make cleantest.

For make test, I used diff for all test cases. I added a corresponding command for each test case. If there is no difference, then the all tests passed. Otherwise some tests failed, and there are some error in the code.

For make cleantest, I just removed all .out file created by P2.java.