Project 1 - Table-driven scanner
CS 4481

Write a table-driven scanner (aka lexical analyzer, tokenizer or lexer) in Java.

After installing NetBeans, do the following. This will ensure that your code is formatted according to the standards for this course.

1. Windows: Go to *Tools > Options > Editor > Formatting*.
2. Mac OS X: Go to *NetBeans > Preferences > Editor > Formatting*.
3. Choose the category "Tabs and Indents".
4. Make sure "Expand tabs to spaces" is checked.
5. Set "Number of spaces per indent" to 2.
6. Choose the category "Blank Lines".
7. Set "In Declarations" and "In Code" both to 20.
8. Go to the far right tab called "On Save".
9. Set "Reformat" and "Remove trailing whitespace from" both to "All lines".
10. Click OK.

Scanner implementation

1. Load the Scanner project into NetBeans.
2. Implement the scanner. It will be implemented in *Scanner.java*. To test your changes, you will uncomment tests in *main.java*. Do NOT make modifications to any other files. The only file you will submit for this project is *Scanner.java*. See TODO comments in *main.java* and *Scanner.java*.
3. You will test your scanner using a "register" table that matches figure 2.14 from the textbook. This table is defined in *data/register.table*. The skeleton code contains the class `TableParser` which parses the table file. You will use the results from this class to build your table data structures. The table data structures are set up for you in the `Scanner` class and use `HashMap<>` as the primary data structure.
4. To test, uncomment appropriate tests in *main.cpp* and choose Run > Run project (or press F6).
5. Your project is ready to turn in once you pass all 18 tests. Submit only *Scanner.java*. Make sure it is the *.java* file, not the *.class* file. Please do not rename the file. Do not submit any other files. Do not zip your project together and submit it. Submit only the one file.

Scoring

You will be graded on how many tests your code passes. The input files when grading will be similar to the test files you are using.