Instructions

We are going to be using Flex and Bison (instead of lex and yacc) to build the parser, and gcc to compile the C code. Installation files are attached in the mail.

If you encounter some problems when running Flex or Bison, move the GnuWin32 folder from Program Files to a folder that does not contains spaces in its name (eg. C:\GnuWin32)

Attached are 4 examples. The first example uses just lex without yacc.

To run Ex0:

* Run: flex characters.l. you should see a new file named lex.yy.c
* Run: gcc lex.yy.c to compile the code.
* Run the resulting .exe file and type your input in the command window.
* The program should output 3 numbers: the total number of characters, the total number of words and the number of lines respectively.

To run Ex1 and Ex2:

* Ex1 is a calculator that supports addition and subtraction, Ex2 supports variables as well.
* Run: bison –yacc calc1.y -d
* Run: flex calc1.l
* Run: gcc y.tab.c lex.yy.c
* Run the resulting .exe file and type your expressions.

To run Ex3:

* Ex3 is a mini compiler that supports 3 modes:
* Interpreter mode: treats the code as an interpreted language and prints its results inline.
* Compiler mode: compiles the code into assembly-like language.
* Graph mode: draws a graph of the parse tree of the expressions.
* To run, simply run bison and flex as per the preceeding examples.
* When running gcc, add the file corresponding to the mode you’d like to the input of the command.
* Ex if you want to run interpreter mode run gcc calc3a.c y.tab.c lex.yy.c
* Compiler mode is calc3b.c and graph mode is calc3g.c

Notes:

<https://www.youtube.com/watch?v=Mmy7y8a-WdA>