Complier Lab (CSE4112)

Assignment#0

Installing and running LEX and YACC

Assignment details

We will install LEX (Lexer) and YACC (Yet Another Compiler Compiler) (or FLEX and Bison). If you are interested to work with JAVA based tools, take a look at http://catalog.compilertools.net/java.html. Among them the most popular one is ANTLR (ANother Tool for Language Recognition). It uses LL(*) parsing which is different than LR/LALR parsing algorithm that YACC uses. Also as it generates an Abstract Syntax Tree (AST) as an output of syntax analysis whereas YACC leaves it up to you to code the output you want to generate. There is also a python versions of the tools (PLY http://www.dabeaz.com/ply/) which is similar to LEX/YACC.

In class as we will focus on LEX and YACC and so in my opinion it will be easier to stick to LEX and YACC. However, you are free to use the other tools. LEX and YACC are Unix/Linux tools, and though there are windows versions of these tools, it is recommended to use the Unix/Linux versions.

Your task is to install the tools. Write up the code for calculator grammar (p. 56-59 LEX and YACC, 1st edition, O'Reilly) and run it. If you want to be a little bit more ambitious try example 3-2 (p.64).

You do not need to understand the attributes of variable of the grammar (e.g. $$, $1, $2,) and how they work. But are encouraged to read the description.

DUE on: February 7 (EVEN group) and February 9 (ODD group) in lab class.