Homework 1

Getting to Know Decaf

Deadline: Tuesday, 9/23/2014, 11:59PM.

This is an individual homework. You may discuss the grammar with others, but your work should be your own.

Task:

1. Write 3 programs in the Decaf language that are lexically and syntactically correct. Your programs should include a comment at the top that explains what the program takes as input (in anything), what it does, and what it outputs if it outputs (if anything).
2. Write 3 programs that are lexically legal Decaf programs, but contains some syntax errors. Your programs should include a comment that explains what the syntax errors are, at the top of the program.

Grading Criteria: Your homework is graded on the extent to which you create good test programs that push the grammar understanding and compiler.

1. *0-5 points. Completeness* – You should have 6 separate programs, 3 legal and 3 illegal, each a minimum of 10 lines long. Clearly label the legal and illegal programs as legal1.decaf, legal2.decaf, legal3decaf, illegal1.decaf, illegal2.decaf, and illegal3.decaf.
2. *0-10 points total. 0-5 points legal. 0-5 points illegal. Coverage of Decaf language constructs* – Your programs should demonstrate your knowledge of the Decaf language constructs by using as many of them as possible.
3. *0-5 points total. Grammar exploration* – The programs should explore the depths of the grammar by trying combinations of constructs to see what is possible within loops or conditionals or classes for example.
4. *3 points. Extra Credit for creativity.*

Total 20 points.

Deliverables:

Electronically submit your 6 programs by committing and pushing to your bitbucket repository. Submit a tar.gz of the homework directory, called hwk1-yourlastname.tar.gz by 11:59PM on the deadline noted above.