CSC301 Assignment #2

Note: Please submit your work either as a PDF file. No other formats will be accepted.

Problem 3.1 a

Given the grammar G6:

G6:
<exp>* ::= <exp + <mulexp> | <mulexp>
<mulexp> ::= <mulexp> * <rootexp> | <rootexp>
<rootexp> ::= (<exp>) | a | b | c

Add subtraction and division operators (- and /) with the customary precedence and associativity to the grammar.

Problem 3.3 b

Show that the following grammar is ambiguous:

<person>* :: = <woman> | <man>
<woman> ::= wilma | betty | <empty>
<man> ::= fred | barney | <empty>

Problem 3.3b can be answered with parse trees, so same process as for assignment #1. If you draw the trees by hand, take a clear picture or visit http://ironcreek.net/syntaxtree/ to generate the parse tree and attach that, too.

Problem 3.4 b

Give an unambiguous grammar for the same language generated by the grammar in problem 3.3 b.