Data Structures (CS/IS 211)

Homework#6 (**DUE 04/24/2017 @ 11:55pm**)

Pages 184 – 185 exercises

#3 (10 pts)

Write a recursive grammar for the language of strings of one or more letters. The first letter of each string must be uppercase, and all other letters in the string must be lowercase.

#5 - both parts (10 pts)

Consider a language of strings that contain only X's, Y's, and Z's. A string in this language must begin with an X. If a Y is present in a string, it must be the final character of the string.

a. Write a recursive grammar for this language.

b. Write all possible two-character strings of this language.

 # 6 - parts a and b only (10 pts) This one involves writing a language of words where each word is a string of dots and dashes.

Consider a language of words, where each word is a string of dots and dashes. The following grammar describes this language:

<word> = <dot> | <dash><word> | <word><dot>

<dot> = •

<dash> = -

a. Write all three-character strings that are in this language.
b. Is the string • • • • - - in this language? Explain.

#10 (5 points) Is the given expression a valid pre-fix expression?

Is + * a – b / c + + d e – f g a prefix expression? Explain in terms of the grammar for prefix expressions.