Homework of Chapter 4

- **4.8**
- **4.12**

- **Deadline: 3.27 (Friday)**
- The homework answers should be written in English.

Chapter 4 Top-Down Parsing

4.8 Consider the grammar:

lexp → atom | list
atom → number | identifier
list → (lexp-seq)
lexp-seq → lexp-seq lexp | lexp

(a) Remove the left recursion
(b) Construct the First and Follow set of the nonterminals of the resulting grammar.
(c) Show the grammar is LL(1).
(d) Construct the LL(1) table for the resulting grammar.
(e) Show the actions of the corresponding parser, given the following input string
(a (b (2)) (c)).

4.12 a. Can an LL(1) grammar be ambiguous? Why or why not?

b. Can an ambiguous grammar be LL(1)? Why or why not?

c. Must an ambiguous grammar be LL(1)? Why or why not?