Programming Languages

CLISP Assignment 1

Instructions:

- All your answers must be in a single text named **<yourFAUID_CLISP1.docx>**
- Include your name, your email address at the beginning of the assignment.
- Your assignment must be submitted through Canvas by the due date
- No late submission is accepted
- All work must be on your own.

Note:

Although you can easily find the answers to these questions by typing them in CLISP environment, however, I would suggest you do them by hand. These hand exercises let you understand how CAR and CDR behave. Later when you develop larger programs, you will feel comfortable of using these basic constructs correctly.

1. Evaluate the following expressions:
   a. (car '(d g t))
   b. (cdr '(p g r s))
   c. (car '((purple 1) (green 2)))
   d. (cdr '((performances 3) (size-of-hall 250)))
   e. (car (cdr '((silver gold) (oil vinegar))))
   f. (cdr (car ' ((#\a #\b) ("c" "d"))))
   g. (cdr (car (cdr '((("smith" 35) ("brown" 26)) (("jones" 45) ("marsh" 43))))))
   h. (car (cdr (car '((1 b) (1 d)))))
   i. (car (cdr (car (cdr '((rooms 3.5) (floor 4th) (available "january 1")))))))
   j. (car (cdr '(cdr (cdr ((a b) (c d) (e f))))))
2. Write the sequence of `CARS` and `CDRs` that will pick the symbol `CHAIR` out of the following lists:
   a. (table lamp chair shelf)
   b. ((table lamp) (chair terminal))
   c. (terminal (shelf) ((chair)) (((sofa))))

d. ((((table) file-cabinet) chair) telephone)