CS 301

Lab 8

1. Use abstraction and the functions *insert-g* and *seqrem* to simplify the function *rember*. Give the simplified Scheme function implementation below. (Hint: “The Ninth Commandment”)

2. How many arguments does the function *multirember* take?

3. How many arguments does the function *multirember&co* take?

4. Describe how the arguments of *multirember&co* and *multirember* are different.

5. Provide a Scheme definition for a NFA machine with a set of four states equal to {*A*,*B*,*C*,*D*} and an alphabet of input symbols equal to {0,1}. The NFA should have a start state of *A*, a single accepting state *D*, and accept any binary strings that contain 00 or 11 as a substring. Give an incremental definition of the machine using Scheme list definitions. (Hint: https://people.cs.clemson.edu/~goddard/texts/theoryOfComputation/3a.pdf and https://facultyweb.cs.wwu.edu/~johnson/CS%20301/Program%20Assignments/program3.pdf)