Comp 430 Program 2

25 points - due: _____, class time - late penalty: 10% per day

Write a function SIMPLIFY such that (SIMPLIFY term r) will take a set r of reductions and apply them exhaustively to the term, returning the simplified version of the term. The set r of reductions is a list in which each member is a single reduction. A single reduction is a list where the car is the left side and the cadr is the right side. Variables are u, v, w, x, y, and z.

Some examples to demonstrate the use of the SIMPLIFY function:

```
*>  (setq r1 '((+ x (- x)) 0))
*>  (setq r2 '((+ (- x) x) 0))
*>  (setq r3 '((+ x 0) x))
*>  (setq r4 '((+ 0 x) x))
*>  (setq r5 '((/ (* x y) x) y))
*>  (setq r6 '((/ (* y x) x) y))
*>  (setq r7 '((* x 0) 0))
*>  (setq r8 '((* 0 x) 0))
*>  (setq r (list r1 r2 r3 r4 r5 r6 r7 r8))
*>  (setq t '(+ c (+ (+ a (+ b (- b))) (- a))))
*>  (simplify t r)
==> C
*>  (setq t '(+ (- (* a b)) (* a b)))
*>  (simplify t r)
==> 0
*>  (setq t '(+ (* (+ (- a) a) (- b)) (/ (* a (+ b c)) (+ b c)))
*>  (simplify t r)
==> A
```

Turn in the documented source code for Simplify.LSP and all supporting functions with the exception of Match (if you need a correct version of Match, I will be glad to supply it for this assignment), using the EASEL system

Note: my test file will first load my match.lsp and then load your simplify.lsp from your EASEL submission.. You should not include the match function within your simplify.lsp file.