



EEL5840: Elements of Machine Intelligence

Rous

Announcements



- **Announcements:**
 - > None
- **Today's Handouts:**
 - > Outline Class 8 (Web)
- **Web Site**
 - > ANN Notes (Dr. Nechyba's)
 - > www.mil.ufl.edu/eel5840
 - > Software and Notes
 - > XLISP Documentation



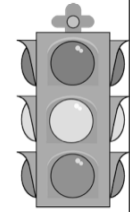
University of Florida
EEL 5840 - Class #9- Fall 2009
© Dr. A. Aravamudan

EEL5840: Elements of Machine Intelligence

Rous

Today's Menu

- **Additional LISP Lab 2 Examples**
 - > REVERSE
 - > EQUAL
 - > LENGTH
 - > MAPCAR
 - > FUNCALL
 - > APPLY
 - > MAPPENDCAR {maybe}



University of Florida
EEL 5840 - Class #9- Fall 2009
© Dr. A. Aravamudan

EEL5840: Elements of Machine Intelligence

Rous

Examples

> (setf n 3 m 3 x 'a y 'a)	> y	> (eq x y)
A	A	T
> (eql n m)	> (setf a 'Boo)	> (setf y (car z))
T	BOO	A
> (eq n m)	> (eq x y)	> (eq x y)
T	T	T
> (equal n m)	> (setf w '(a b) z '(a b))	> (null nil)
T	(A B)	T
> (= n m)	> (eq w z)	> (atom nil)
T	NIL	T
> (eq 'a 'a)	> (equal w z)	> (eq (first '(1 2)) (second '(2 1 3)))
T	T	T
> (eq x y)	> (setf x (car w))	> (eq 3.3 3.3)
T	A	NIL
> x	> (setf y (car w))	> (eql 3.3 3.3)
A	A	T

University of Florida
EEL 5840 - Class #9- Fall 2009
© Dr. A. Aravamudan

EEL5840: Elements of Machine Intelligence

Rous

LISP Lab 2


- Consider the following example:


```
(defun MEMB1 (SEX LIS) (COND
  ((NULL LIS) NIL)
  ((EQ SEX (CAR LIS)) LIS)
  (T (MEMB1 SEX (CDR LIS)))))
```
- Why? Because (eq '(a) '(a)) is NIL. To fix use equal


```
(defun MEMB2 (SEX LIS) (COND
  ((NULL LIS) NIL)
  ((EQUAL SEX (CAR LIS)) LIS)
  (T (MEMB2 SEX (CDR LIS)))))
```

> (memb2 '(a) '(a) (b))
(A) (B)

University of Florida
EEL 5840 - Class #9- Fall 2009
© Dr. A. Aravamudan



EEL5840: Elements of Machine Intelligence

Rous


LISP Lab 2 - Examples

Let us reverse a list

```
(defun REV (Lis) (cond
  ((Null Lis) nil)
  (t (Append (Rev (Cdr Lis)) (List (Car Lis)))))
```

By the way: (List Sex) == (Cons Sex nil)

University of Florida
EEL 5840 - Class #9 - Fall 2009
© Dr. A. Aravamudan



EEL5840: Elements of Machine Intelligence

Rous

See LISP Notes 1 The End!

University of Florida
EEL 5840 - Class #9 - Fall 2009
© Dr. A. Aravamudan