Instructor:
Joel Castellanos
Email: joel@unm.edu
Web: http://cs.unm.edu/~joel/
Office: Farris Engineering Center (FEC) room 321

(define f
  (lambda (n)
    (cond
      ((= n 1) 1)
      ((= n 2) 1)
      (else (+ (f (- n 1)) (f (- n 2))))))
  )
)
Homework - Sunday Night at Midnight

- Due Sunday Night at Midnight (2/3/2008)
  - Read “The Little Schemer” Chapter 2.
  - Verify the Examples in MzScheme or DrScheme.
  - Create 3 original questions/answers in the style of the text.
    - Use only syntax introduced in chapter 1 & 2.
    - Submit into WebCT.
    - Use plain text.
- Grading:
  - C: Follow the rules.
  - B: One is Creative, Insightful, Thought Provoking.
  - A: Two or Three are C/I/TP.
Next Slide Quiz

- Closed Computers, 
- Closed Neighbors, 
- Closed Cell Phones 
- Open Notes, and books
Quiz

What is:

(define x '(a b c))
(define y '(d e f))
(cons (car y)
  (cons (car (cdr x)) ()
  ))
What does this do?

(define f
  (lambda (n)
    (cond
      ((= n 0) 0)
      ((= n 1) 1)
      (else (+ (f (- n 1)) (f (- n 2))))))))

Fibonacci numbers:

What is:
(f 4)
(f 5)
(f 6)

F(n) = \begin{cases} 
0 & \text{if } n = 0; \\
1 & \text{if } n = 1; \\
F(n-1) + F(n-2) & \text{if } n > 1.
\end{cases}
Fibonacci Numbers by If and Case

;(if <test> <consequent> <alternate>)
(define g
  (lambda (n)
    (if (= n 0) 0
      (if (= n 1) 1
        (+ (f (- n 1)) (f (- n 2)))
      )
    )
  )
)

;(case <key> <clause1> <clause2> ...) 
(define h
  (lambda (n)
    (case n
      ((0 1) 1)
      (else (+ (f (- n 1)) (f (- n 2)))))
  )
)

2/4/2008
What is (k 25)

(define g
  (lambda (a b) (zero? (remainder a b)))
)

(define h
  (lambda (a b)
    (if (= a b) 'yes
      (if (g a b) b (h a (+ b 1)))
    )
  )
)

(define k (lambda (a) (h a 2)))