CSC 151 Spring 2020
Topic: Basic Recursion

March 2, 2020

Day 18

Agenda for today

- Peer Support Opportunities
- Review Time!
- Lab – finish from Friday
- Wrap-up

Peer Support Opportunities

- Orchestra Concert, Saturday 2pm

Other Good Stuff

CS Table
Tuesday (tomorrow) 12pm
Topic: Autonomous Weapon Systems

Review of Material

(map – (iota 2))

A: Error

B: ‘(0 -1)

C: ‘(-1 0)

D: ‘(0 -1 -2)

(length (list (list 1 2 3)))

A: 3

B: 2

C: 1

D: 0

(define Presidents (list “Washington” “J. Adams” “Jefferson” “Madison” “Monroe” “J.Q. Adams” “Jackson”))

(caddr Presidents)

A: “J. Adams”

B: “Jefferson”

C: “Madison”

D: “Monroe”

Which of the following produce an error?

A: (append (iota 1) (iota 2))

B: (append null (iota 2))

C: (append 1 (iota 2))

D: None of the above

How many arguments does map take?

A: 1

B: 2

C: 2 or more

D: 3 or more

What type is the input?

```
(define
  :/                                                    (lambda (
  :)      (map (o (section list-ref : <>) (section - (length
  :)                                          <> 1)) (iota (length
  :)                                                        ))))
```

A: any list

B: an integer

C: a list of numbers

D: a list of strings

What are the inputs to filter?

A: a **list**

B: a **list of lists**

C: **any predicate** and a **list**

D: a **unary predicate** (only one input) and a **list**

```
(define proc
  (lambda (lst)
    (if (null? lst) ""
      (string-append (car lst) (proc (cdr lst))))))
```

(proc (list “ba” “na” “na” “s”))

A: Error

B: “bananas”

C: “bananas ”

D: “snanaba”

```
(define great-procedure
  (lambda (lst)
    (cond [(= (length lst) 2) "great"]
          [(= (length lst) 1) (great-procedure (cons 1 lst))]
          [else (great-procedure (drop lst 2))])))
```

(great-procedure (iota 7))

A: Error

B: runs forever

C: “great”

```
(define great-procedure
  (lambda (lst)
    (cond [(= (length lst) 2) "great"]
          [(= (length lst) 1) (great-procedure (cons 1 lst))]
          [else (great-procedure (drop lst 2))])))
```

(great-procedure (iota 7))

How many total calls to great-procedure will this produce?

A: 4

B: 5

C: 6

C: 7

Lab Time

Start with the person on the West side of the room.

Finish the lab
Make sure you have documentation completed
Do the Extras if you are done
Work on Assignment 5, **only if you are done with all of the above!**

Upcoming Work

Please submit Exercise 5(a) by Wednesday at 10:30 pm.
Send your code and 6P documentation.
To: csc-151-02-grader@grinnell.edu
CC: Your lab partner
Subject: CSC 151-02 Lab 3/2

Finish today's lab before we meet again.
Reading for next class.
Assignment 5 is due on Thursday.