CSC 151 Fall 2019
Topic: Reading Lists and Tables from Files

September 20, 2019

Day 10

Agenda for today

- Quiz 2 Feedback
- Peer Support Opportunities
- Exam 1 Information
- Reflection Time
- Lab
- Wrap-up

Quiz 2 Feedback

```
;;; Procedure:
;;;  median
;;; Parameters:
;;;  numbers, a list
;;; Purpose:
;;;  to find the median
;;; Produces:
;;;  val, a real number
;;; Preconditions:
;;;  every element of numbers is a real number
;;;  (length numbers) is odd
;;; Postconditions:
;;;  val is an element of numbers
;;;  If n = (length numbers), then there are (n-1)/2 elements in numbers
;;   which are less than val, and (n-1)/2 elements in numbers which are
;;   greater than val.
```

Peer Support

- Men's Basketball, Wednesday 5:30pm
- Men's Basketball, Saturday 1pm
- Track Meet, Saturday 9:30am, running events at 11am
- Swim Meet Friday, Saturday, and Sunday 10am start time

Other Extra Credit

- **“Love Data” Events**

Talk by Data Journalist & Grinnell Alumni, **Thursday 2/13, 11am,** JRC 101

Transcribing event, **Friday 2/14, 1-4:30pm**, Burling Library Basement

- **Thursday Extra**

Thursday, 2/13, 4pm. Noyce 3821

Topic: A conversation with David Montgomery ‘08

- **CS Faculty Candidate Talk**

Tuesday, 2/18, 4pm, Noyce 3821

Topic: AI and moral reasoning

Quick Review

	Input	Output
`map`	procedure and list(s)	list
`reduce`	procedure and list(s)	number or string, or…
`section`	one input per <>	procedure
`o`	one or more procedures	procedure

Quick Review

	Input	Output
map	**procedure and list(s)**	**list**
reduce	procedure and list(s)	number or string, or…
section	one input per <>	procedure
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```
> (map square (list 1 2 3 4 5 6 7 8 9 10))
'(1 4 9 16 25 36 49 64 81 100)

> (map number->string (iota 5))
'("0" "1" "2" "3" "4")

> (map + (list 1 2) (list 3 4) (list 5 6))
 '(9 12)
```

Quick Review

	Input	Output
`map`	procedure and list(s)	list
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`o`	**one or more procedures**	**procedure**

```
> (map ceiling (map square (map sqrt (list 1 2 3 4 5 6 7 8 9 10))))
'(1 3.0 3.0 4 6.0 6.0 8.0 9.0 9 11.0)

> (map (o ceiling square sqrt) (list 1 2 3 4 5 6 7 8 9 10))
'(1 3.0 3.0 4 6.0 6.0 8.0 9.0 9 11.0)
```

Quick Review

	Input	Output
`map`	procedure and list(s)	list
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`section`	**one input per <>**	**procedure**
`o`	one or more procedures	procedure

```
> (define this-and-that (section list <> "and" <>))
> (this-and-that "ham" "eggs")
'("ham" "and" "eggs")
```

```
> (section string-ref <> 0)

> (o (section string-ref <> 0) cadr)

> (map (o (section string-ref <> 0) cadr) capitals)
```

Exam 1

Will be posted by 5:00pm on Friday – note will be posted on Piazza

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Will be posted by 5:00pm on Friday – note will be posted on Piazza

Due next Thursday

Open Notes/Book/Web with citations

You may only ask me (Professor Eikmeier) for help – no one else

Do not post content-centered questions about the Exam on Piazza:

- I don't understand what Question 1 is asking
- How do I write a procedure to do xyz…
- etc.

You may post procedural questions:

- When is the exam due?
- Where do I submit my exam?
- etc.

Exam 1 - Getting Started

Download the Starter Code
You *must* write your solutions in the exam1.rkt file linked on the exam page.

Generate a Random ID
Open DrRacket and run (random 1000000). The six-digit result is your random ID. Replace 000000 in the exam file with this ID.

Read the Exam Carefully
Look at *every* problem. You need not begin with the first problem.
Read the exam procedures carefully as well.

Exam 1 - Tips

Save often
No code is perfect, including the code for DrRacket. Save your work often.

Ask me for help
You can ask me for help. Don't struggle for hours; I can give hints!
You cannot ask mentors, tutors, students, or anyone else for help on exams.

Show at least three examples
The exam starter code has space for you to show examples of your code running. You must show at least three examples to receive full credit.

Start early, and don't panic
You can complete this exam if you work diligently. You'll be much more productive if you work for short periods over the full week.

There's more to life than Computer Science

You can get a minimum of 70% on the exam if you do the following:

1. You must show evidence of serious effort on at least four exam problems.
2. You must provide a time log for each problem on the exam, and the log should represent total time of at least five hours.
3. You must work at least 5 hours – and document that time.
4. You must complete the Prologue and Epilogue

Cover Sheet – Next Week

Next week we will sign a cover sheet together in class.

You will need to write and sign the following statements:

- **I have neither received nor given inappropriate assistant on this examination.**
- **I am not aware of any other students who have given or received inappropriate assistance.**

If at any point during this next week one of the above statements you cannot truthfully agree, please come and talk to me as soon as possible.

Reflection Time

Given that the exam goes out later this week…

Are there any topics/concepts that are still confusing to you?

Lab Time

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

Note: Do not display the whole zips list – it will crash the computers!

Please Submit…

No Submission for today. Reminder: You are still expected to finish the lab before we meet again.

Readings for Class on Friday
Finish today's lab before Friday

Assignment 3

Due **tomorrow** at 10:30pm