CSC151.02 2013F, Class 15: Transforming Images

Overview

- Preliminaries
  - Admin.
  - Exam questions.
- Transforming images by transforming each pixel.
- Sequencing transformations with compose.
- Anonymous transformations.
- Lab.

Admin

- Continue lab partners!
- If you have restrictions about partners for the next assignment, email me by midnight tonight.
  - "I want to work alone."
  - "I only want to work in a mixed-sex group."
  - "I only want to work in a same-sex group."
- I’m going to have an optional class this Thursday at 1:15 (and, I hope, most Thursdays) as a chance to talk to folks about more things that might be useful or interesting.
- Work for Wednesday:
  - Finish the exam (10:30 tonight).
  - Reading for Wednesday: Making and Manipulating Homogeneous Lists
  - Lab writeup 5: Problems 4 and 7 from Transforming Images Due before class on Friday. (Ideally before class on Wednesday.)
- EC Opportunities:
  - CS Extras Thursday @ 4:30: Jennelle Nystrom on working at Microsoft
  - CS Table Friday (The Story of Mel)
  - Football, 1pm, Saturday against Beloit
  - Orchestra, 2pm, Saturday, Sebring-Lewis or somewhere similar
  - Folksyish music with Seth at Relish, Wednesday at 10pm
  - Knitting club, Saturday at 10am. Do good and have fun!
  - More ...?

Exam Questions
Transforming images by transforming each pixel

- (image-variant image function) Builds a new image by applying function to each pixel
- Subtle, strange, and potentially complicating
  - Traditionally, we write (function params)
  - When we write (image-variant kitten rgb-complement)

Sequencing transformations with compose

- If we want multiple transformations, we can compose them (image-variant kitten (compose rgb-complement rgb-redder))

Anonymous transformations

- Can also use lambda outside of a define (image-variant kitten (lambda (color) (rgb-new 255 0 (rgb-blue color)))))
- Why do this rather than (define fred (lambda (color) (rgb-new 255 0 (rgb-blue color)))) (image-variant kitten fred)

Lab

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