CS 357 - Lab 002

Session 0, Installs & Intro

Kage Weiss

CS 357 - Lab 002

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- Sign in quiz on LEARN, details to follow.

- Today we are working on ensuring you have the proper programs:

  - Racket

  - Emacs

    - A .emacs file to enable Racket to be run in a window in Emacs

    - Basic command understanding, quick reference guide
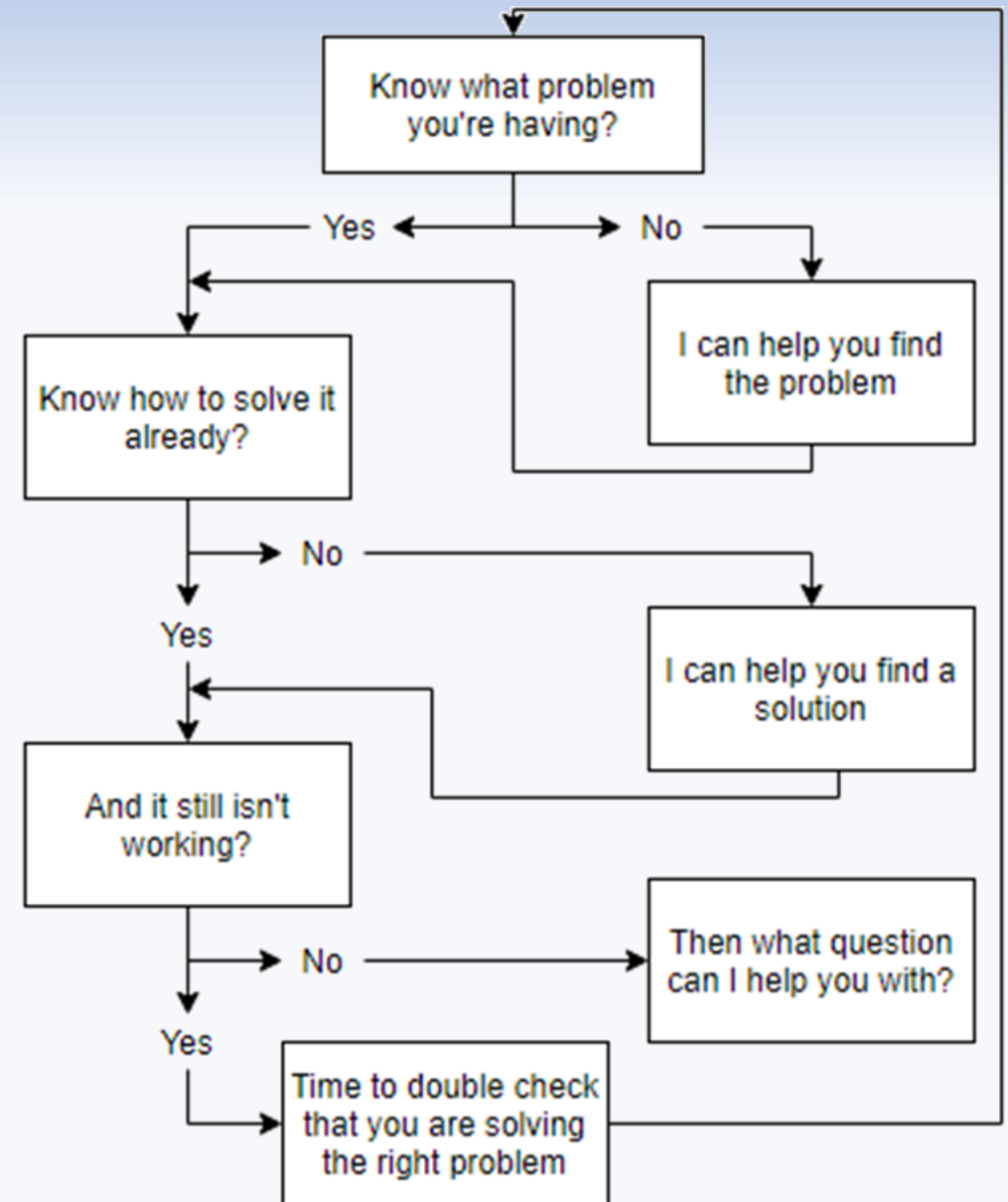
Intro

Kage Weiss

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cs.unm.edu/~kageweiss/TA/cs357.html

- Graduate student in CS
- 5 years experience in a TA position
- Primary point of contact for software for this class
- Here to help you succeed by
  - Answering questions
  - Helping you find your questions
  - Giving guidance
- Not by
  - Coding for you
  - Walking you through a 3XX level course by hand

How I Run a Lab:

- Sign in! Guests too! My slides will say whether to sign in by email or on a sheet, this helps show that you are putting in the work next time you need an extension from the professor.

- If the lab we are working on is one that may benefit from some explaining, I'll give a mini-lecture at the start of lab. You are free to ignore me and just get to work if you feel confident in your understanding!

- I'll be here on Zoom, but please shoot me a message or speak up if you need help. That's literally why I'm here, so please let me know if you are having problems or questions!

Emacs

Coding in Scheme for this course

docs.racket-lang.org/guide/Emacs.html

- gnu.org/software/emacs
- Download (Win, Mac, Linux)

    Download from the applicable link

    - Linux command line

    $ alias please="sudo"

    $ please apt install emacs

Scheme

Coding in Scheme for this course

- racket-lang.org
- Download (Win, Mac, Linux)
  - Download from the applicable link
    - Linux command line
    $ alias please="sudo"
    $ please apt install racket
- "The best of Scheme and Lisp"
  - "Using R6RS Scheme"
- We are NOT running Racket.
  I do not want to see Racket
  artifacts in your submissions.

Emacs

Coding in Scheme for this course

Emacs is a standard command line tool, you should be able to do at least the following:

- splitting windows
- changing windows
- moving backward and forward in a file
- copy and paste
- saving files

Emacs

Coding in Scheme for this course

docs.racket-lang.org/guide/Emacs.html

This is likely the set of steps that will take the most debugging work.

NOTE: This is the standard .emacs setup, use only if you choose to make further alterations. I have provided you with a .emacs file you can use as described on the next slide.

- Setup .emacs
  - emacswiki.org/emacs/InitFile
  - melpa.org/#/getting-started
  - emacswiki.org/emacs/ InstallingPackages

- Setup .emacs Racket integration
  - nongnu.org/geiser/geiser_2.html
    alt-x package-install <RET>
    geiser <RET>
    OR
    git clone http://git.sv.gnu.org/r/geiser.git
    (load-file "~/lisp/geiser/elisp/geiser.el")

Emacs

Coding in Scheme for this course

This is the basic custom .emacs, provided by Dr. Williams

- Setup .emacs
  - Go to my webpage
  - Download the .emacs file given to the proper directory (Open Home Directory)
  - Set your path where indicated
- Key combinations
  - C-x 2
    Splits the window into code and running
    Set both buffers to your .scm file, chose one to run scheme
  - C-x h
    Selects all
  - C-c C-r
    "compiles" selected region to scheme frame

Emacs

Coding in Scheme for this course

Need another command?
Check the built in tutorial!

- Ctrl-x Ctrl-f   Find file
- Ctrl-x Ctrl-s   Save file
- Ctrl-x s   Save some buffers
- Ctrl-x Ctrl-b   List buffers
- Ctrl-x b   Switch buffer
- Ctrl-x Ctrl-c   Quit Emacs
- Ctrl-x 1   Delete all but one window
- Ctrl-x u   Undo
- Ctrl-z   Suspend (resume with "fg" or "%emacs")
- Ctrl-v   Move forward one screenful
- Alt-v   Move backward one screenful
- Ctrl-l   Clear screen and redisplay all the text
- Ctrl-f   Move forward a character
- Ctrl-b   Move backward a character
- Alt-f   Move forward a word
- Alt-b   Move backward a word
- Ctrl-n   Move to next line
- Ctrl-p   Move to previous line
- Ctrl-a   Move to beginning of line
- Ctrl-e   Move to end of line
- Alt-a   Move back to beginning of sentence
- Alt-e   Move forward to end of sentence

             …

Personal Recommendations

These are some things you can do to

- Windows Users:
  - WSL
    - Ubuntu 18.04 LTS
    - Easy, clean, Linux Command Line
  - Notepad++
    - Additional functionality
    - Easy to use editor
    - Not an IDE (forces you to learn the hard parts)
- In general:
  - IDEs are really helpful!
  - Sometimes too helpful!

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Go forth,
install your software.

Remember, these slides are available:

cs.unm.edu/~kageweiss/TA/cs357.html