CSCI 334:
Principles of Programming Languages

Instructor: Dan Barowy

Williams

Next class: meet at WCMA

How do you know when you are done writing a program?

Goals

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1. Speak the “language of languages”

Goals

1. Speak the “language of languages”
   a. evaluate fitness of language for purpose

Goals

1. Speak the “language of languages”
   a. evaluate fitness of language for purpose
   b. rapidly learn new language

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2. Add tools to your mental toolbox

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2. Add tools to your mental toolbox
   a. including techniques for clear thinking

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   b. become a (much) better programmer

Goals

1. Speak the “language of languages”
   a. evaluate fitness of language for purpose
   b. rapidly learn new language
2. Add tools to your mental toolbox
   a. including techniques for clear thinking
   b. become a (much) better programmer
3. Be the kind of class you look forward to attending

Mental technique #1: calendar

Feedback

Feedback

1. Optional feedback on assignments

Feedback

1. Optional feedback on assignments
2. Optional, anonymous feedback form on course website

Feedback

1. Optional feedback on assignments
2. Optional, anonymous feedback form on course website
3. Periodic, in-class anonymous feedback

Swell demo

Swell demo

Swell demo

Swell demo

Syllabus

Assignments

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1. Weekly reading responses, due Monday by 10pm (~1 hour)

Assignments

1. Weekly reading responses, due Monday by 10pm (~1 hour)
2. Weekly problem sets, due Thursday by 10pm (anywhere from 2-10 hours)

Books on reserve in Schow

Grades

Grades

I despise grades.

Grades

I despise grades.

They discourage risk-taking.

Anonymous grading

(suggested by UNiCS)

Homework late policy

Homework late policy

Homework resubmit policy

Honor Code

Github

Homework explanation session?

Course Organization

Course Organization

First half

Course Organization

First half

- theoretical foundations

Course Organization

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- common elements of languages

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- theoretical foundations
- common elements of languages
- functional vs. imperative languages

Course Organization

First half

- theoretical foundations
- common elements of languages
- functional vs. imperative languages
- new ways of thinking

Course Organization

Second half

Course Organization

Second half

- implementation techniques

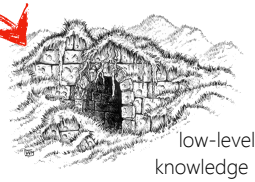
Course Organization

Second half

- implementation techniques
- object oriented programming

big questions

big questions



low-level
knowledge (C)

big questions

low-level
knowledge (C)

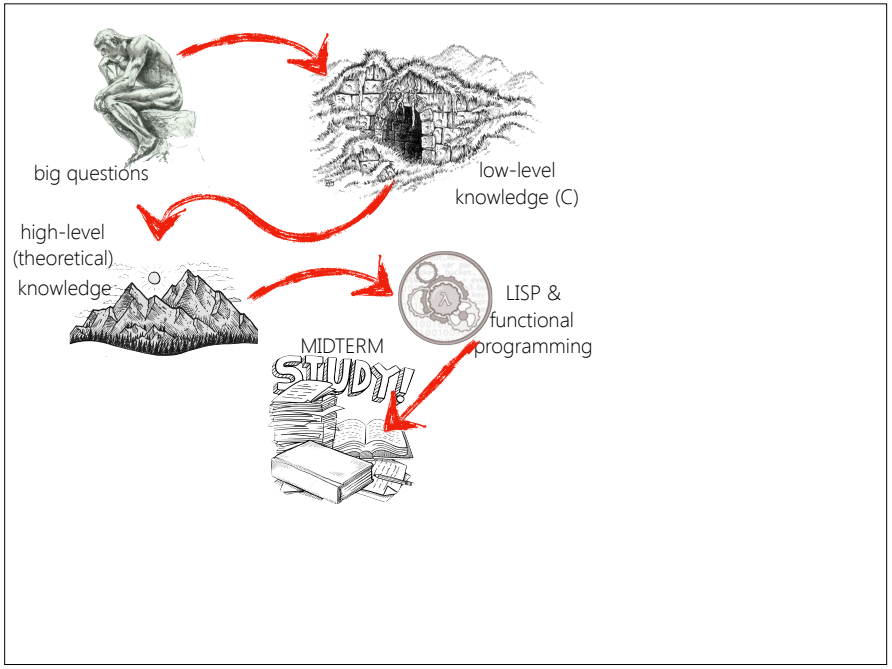
high-level
(theoretical)
knowledge

big questions

low-level
knowledge (C)

high-level
(theoretical)
knowledge

LISP &
functional
programming


big questions
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LISP &
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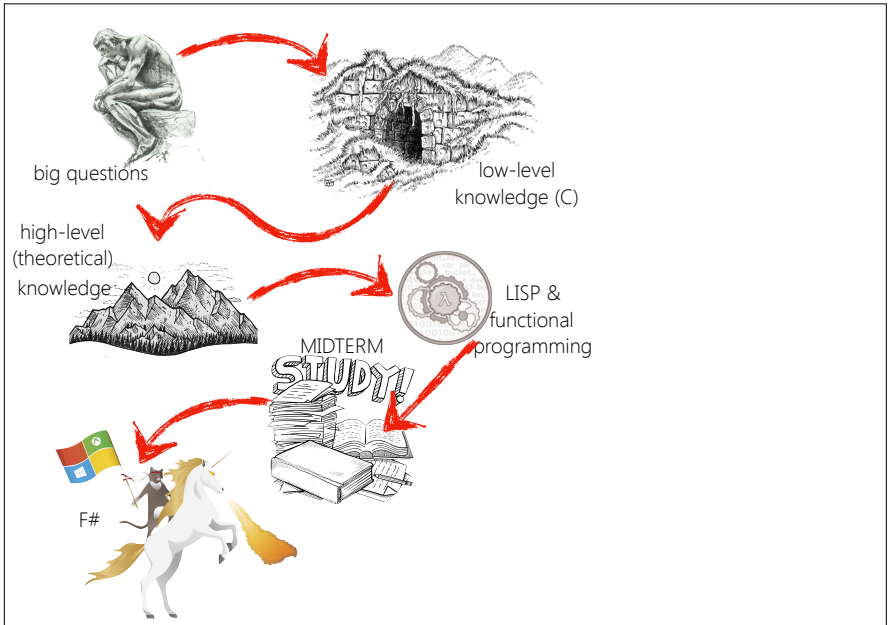
programming
MIDTERM
STUDY!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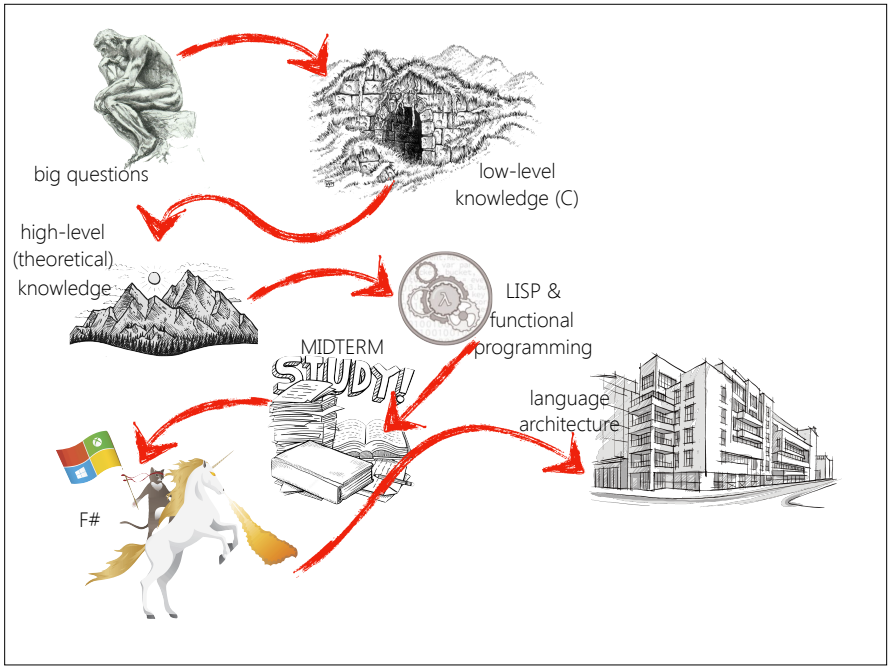
F#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language
architecture
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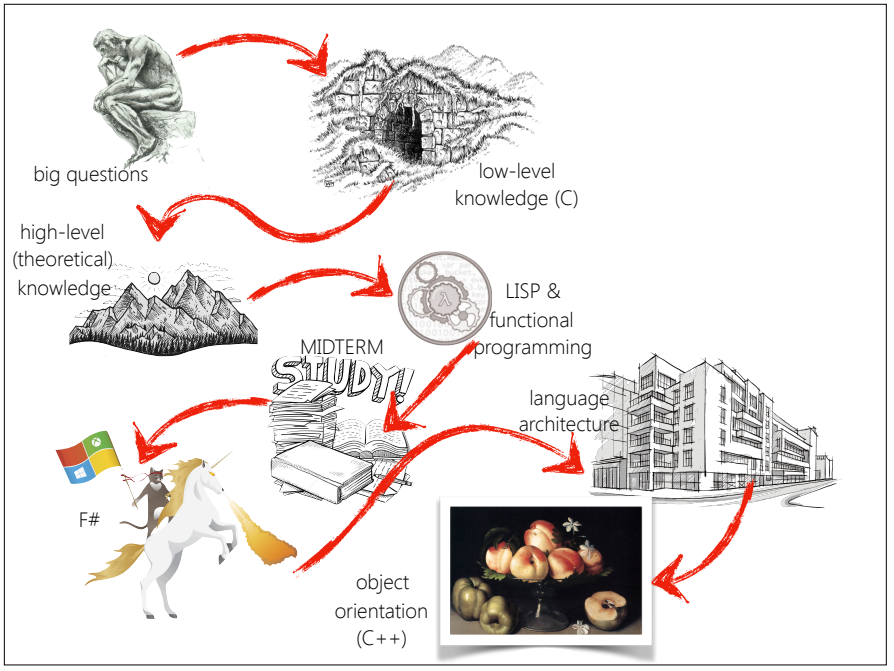
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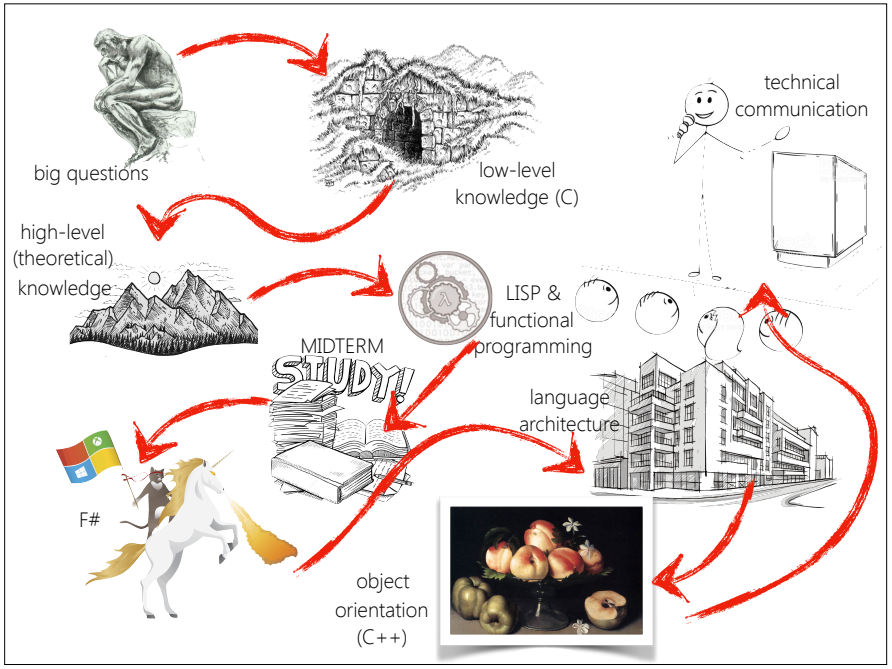
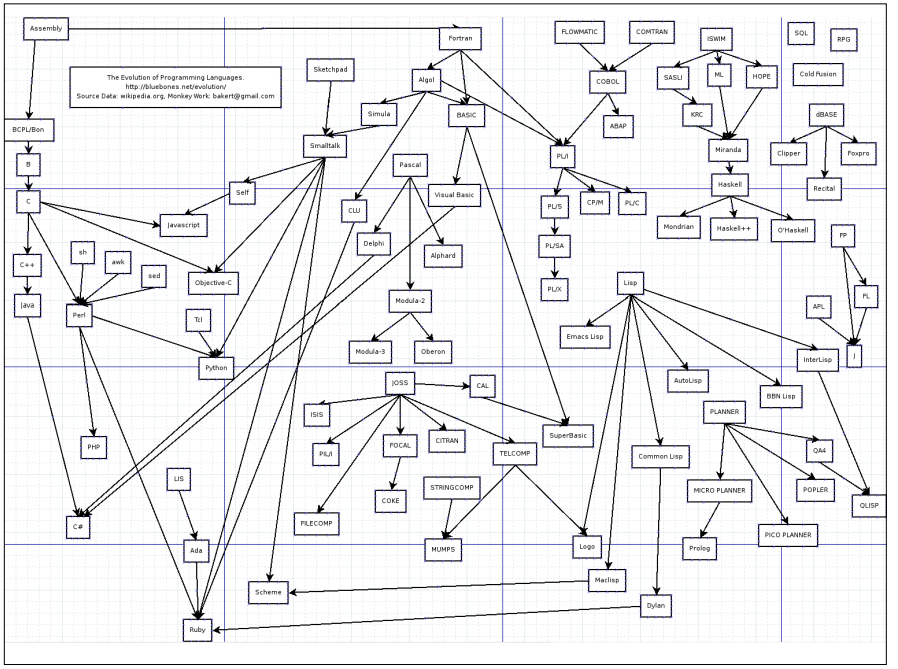
language
architecture
F#
object
orientation
(C++)





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What do you know (or think you know) about it?