

CS61A

The Structure and Interpretation Of Computer Programs

Lecture 1.1.1:

Introduction and Functional Programming

2005-06-20

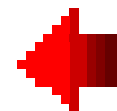
Kurt Meinz

`www-inst.eecs.berkeley.edu/~cs61a/`



Lecture outline

- **Introduction to the Course**
- Administrivia
- Intro to Scheme
- Functions

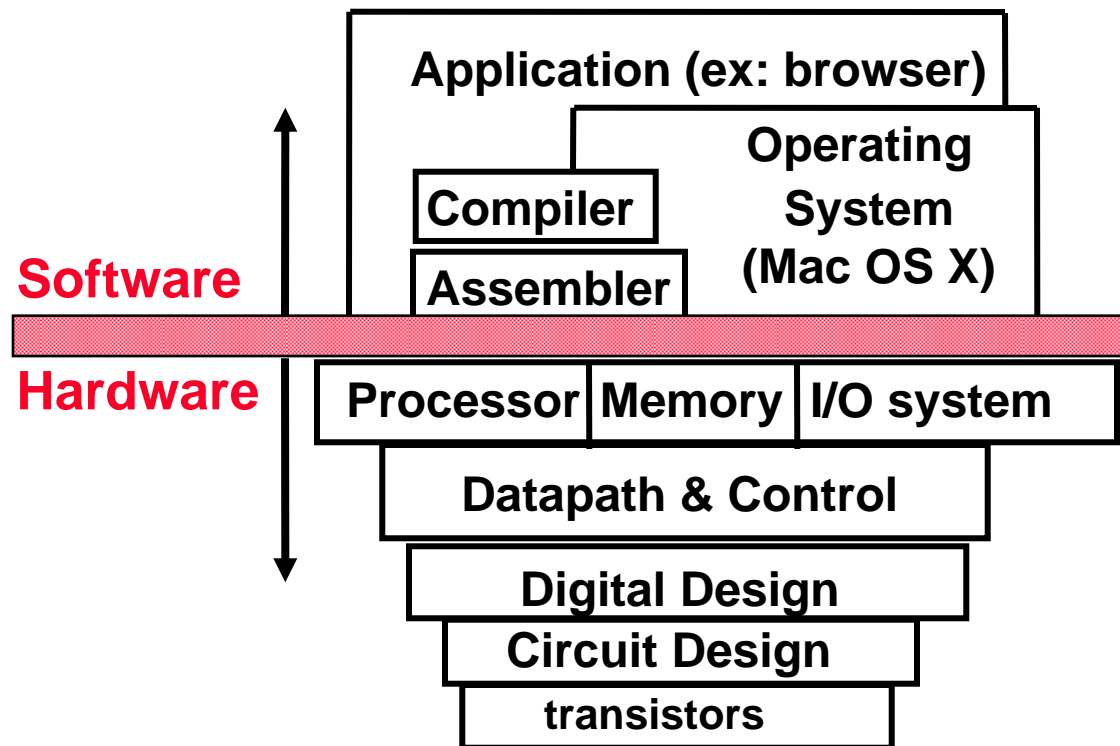


Course Intro

- **Welcome to UCB CS!**
- **61a is an amazing course,...**
 - **But make sure you are here for the right reasons!**
- **My Goal:**
 - **Teach you to think like a computer scientist!**
 - **(Not teach you a language etc.)**



The CS/EE Hierarchy of Abstraction



Administrivia: Staff

- **Instructor:** Kurt Mainz
- **Teaching Assistant:** Jeff Chiang
- **Readers:** Oleg Mayba
Sujoy Karve
- **Lab Assistants:** Jay Chua
Dawn Chen



Administrivia: Materials

“The Structure and Interpretation of Computer Programs”

- Required! (Available online for FREE!)

▪ “Simply Scheme”

- Very Optional!

▪ Course Reader *(Available Wednesday)*

- Convenient and Relatively Cheap



- Duplicated* Online

Administrivia: Class Structure

- **Lectures**
 - Room change?
- **Labs**
- **Discussions**
- **Office Hours** (*Today 1:00-2:00*)



Administrivia: Grades

- **Absolute scale with *NO* curve:**

16 labs	@	1 point each	=	16 pts
15 homeworks	@	4 points each	=	60 pts
2 mini projects	@	7 points each	=	14 pts
2 larger projects	@	10 points each	=	20 pts
3 midterms	@	40 points each	=	120 pts
1 final			=	70 pts
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39 assignments				300 pts

	A	270–300	A–	260–269
B+	B	240–249	B–	230–239
C+	C	210–219	C–	200–209
D+	D	180–189	D–	170–179



Administrivia: Assignments

- **Labs**
- **Homeworks**
- **Projects**
- **Exams**



Administrivia: Regrading

- **Conundrum:**

**We want you to do homework,
but it is unfair to grade you based on the
first time that you've seen the material!**

Solution: ??????????????



Administrivia: Regrading

- **Conundrum:**

**We want you to do homework,
but it is unfair to grade you based on the
first time that you've seen the material!**

Solution: “Two bites at the apple”



Administrivia: Regrading

- **Big Idea: Show us that you understand!!**
- **2 Homeworks per week**
 - Both due Sunday 8:00pm
 - Solutions posted immediately
 - Readers will have graded your homework and given you a score and rudimentary comments by Tuesday's lecture.
 - Homeworks graded on correctness!



Administrivia: Regrading

- **If $< 90\%$, sign up for a re-grading session:**
 - **Show your reader that you understand what you lost points on.**
 - **Be able to demonstrate that understanding on similar problems.**
- **Get points back!!**
- **(Graded on a mixture of correctness and effort; up to 90/100 back)**



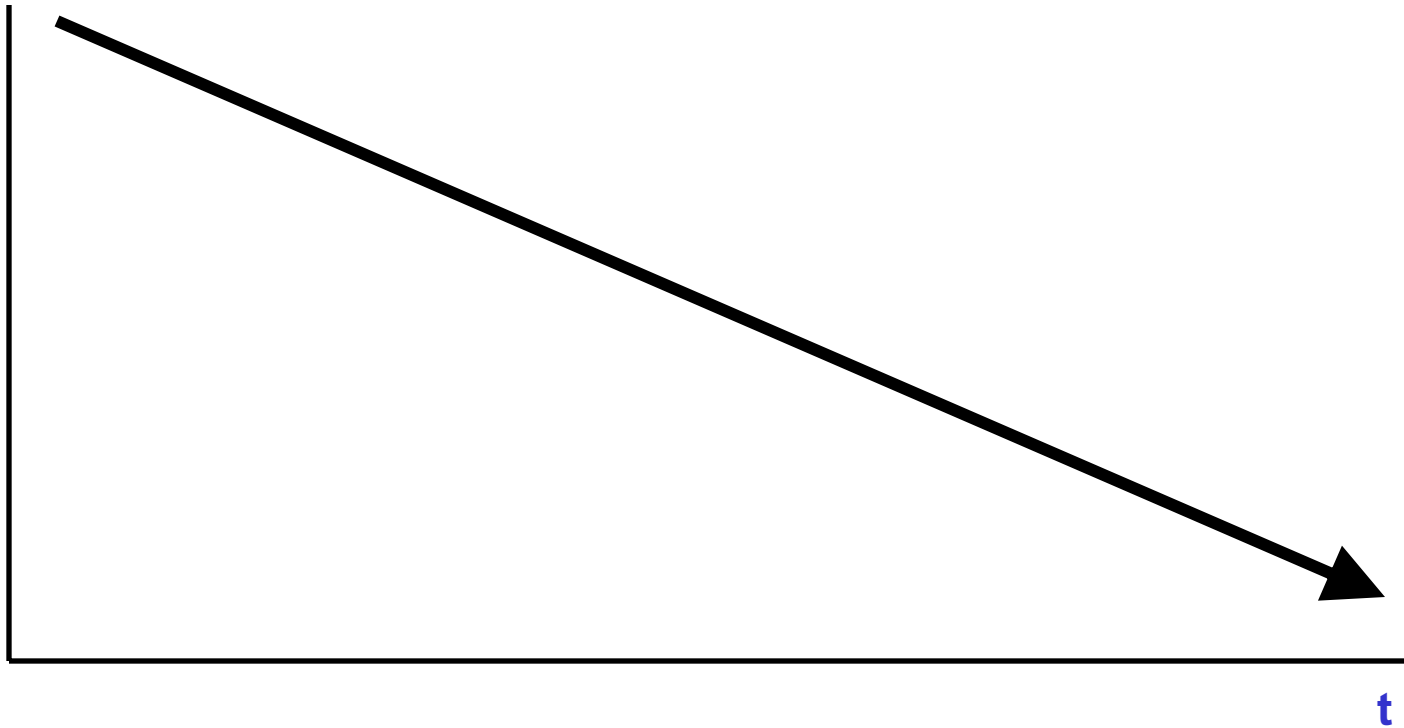
Administrivia: Regrading

- **This is a very student-friendly policy!**
 - Only possible since small enrollment during the summer
- **Do NOT abuse it:**
 - In order to get any points back, you have to put effort in initial homework



What is this?

Administrivia: Breaks

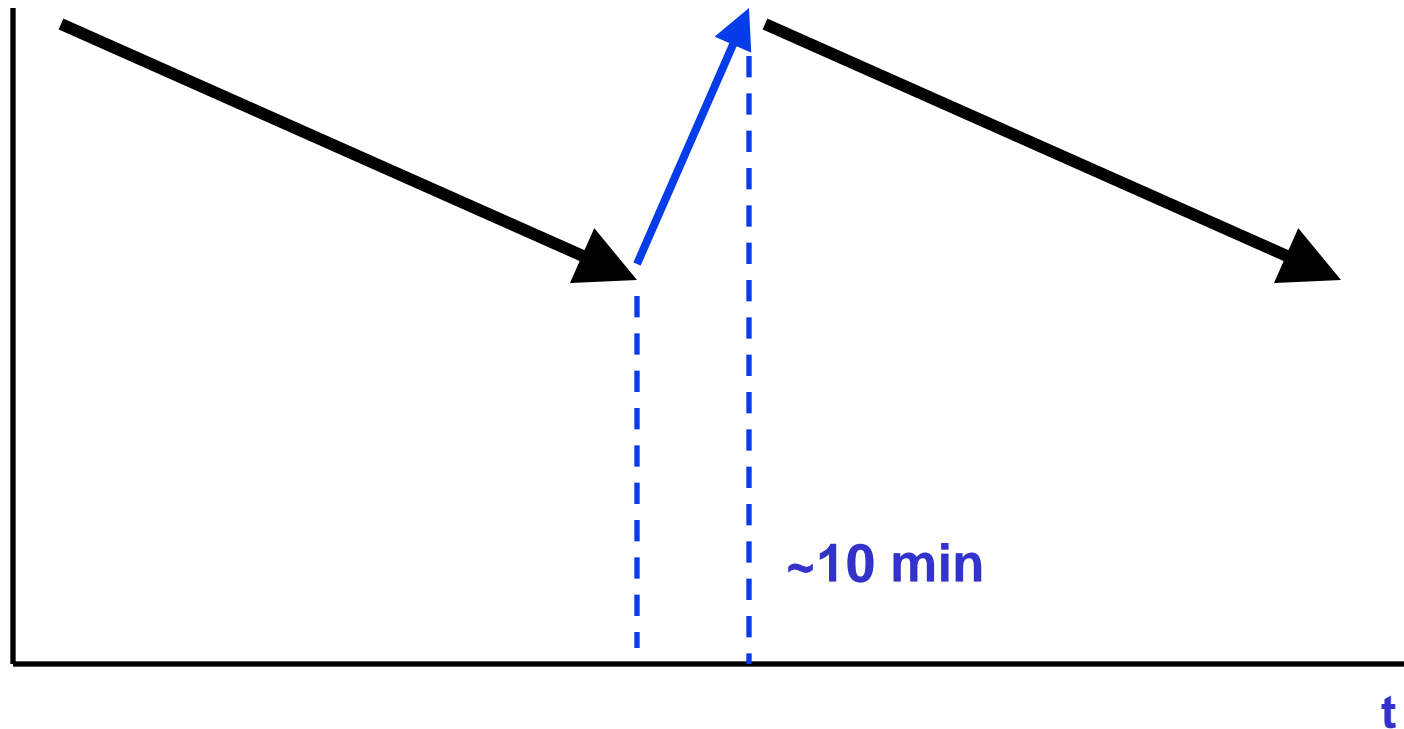


Attention over time!



Administrivia: Breaks

What is this?



Attention over time!



Intermission

Course Survey/Cheating Handout

Come see me if you have enrollment issues!



Lecture outline

- Introduction to the Course
- Administrivia
- **Intro to Scheme**
- Functions



Scheme: Properties

- (Interactive) Interpretation (*not compiled*)

Scheme

C

Stk: (+ 2 3)
> 5

C:\ gcc -o virus.exe virus.c virus.h
C:\virus.exe

- Functional (*not imperative*)

Scheme

C

Stk: (+ 2 3)
> 5

do_this();
do_that();

?? Does this make
Scheme less powerful??



Scheme:

Playtime in scheme!!

